US Military Strategy in Four Dimensions

A Monograph
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14. ABSTRACT

The monograph that follows seeks to analyze the current military strategy of the US. The framework proposed by the renowned military historian Michael Howard assists in this endeavor. The resulting analysis establishes the criteria for an effective military strategy. As defined within the monograph an effective military strategy will present a successful operational strategy, a sustainable logistical strategy, a sufficient technological strategy, and a supportable operational strategy. A wide range of comparable strategies, doctrinal sources, critiques from think tanks and defense experts, and academic research assists in developing the analysis and argument. Once the analysis is complete, the monograph recommends a focus on improving the effectiveness of the existing strategy in the logistical, technological, and social dimensions.

The monograph establishes that the current deliberate military strategy of the US as documented in the 2010 Quadrennial Defense Review and the 2011 National Military Strategy is likely to be ineffective. Given faulty assumptions in the logistical dimension, the need for extensive reforms within a historically unchanging procurement bureaucracy, and indications that American society prefers social programs to defense spending, emergent strategies are required to adjust the current plan. A solid operational core cannot succeed on its own. It needs the social support required to generate sustainable logistical and sufficient technological dimensions critical to an overall effective military strategy.

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Abstract

US Military Strategy in Four Dimensions by LTC James C. Markert, US Army, 67 pages.

The monograph that follows seeks to analyze the current military strategy of the US. The framework proposed by the renowned military historian Michael Howard assists in this endeavor. The resulting analysis establishes the criteria for an effective military strategy. As defined within the monograph an effective military strategy will present a successful operational strategy, a sustainable logistical strategy, a sufficient technological strategy, and a supportable operational strategy. A wide range of comparable strategies, doctrinal sources, critiques from think tanks and defense experts, and academic research assists in developing the analysis and argument. Once the analysis is complete, the monograph recommends a focus on improving the effectiveness of the existing strategy in the logistical, technological, and social dimensions.

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Introduction

As the United States and its allies enter their 9th year of war against Al Qaeda and its affiliates, it is important to remember that such long-term challenges to global security are not new. Following the end of World War II, the allied powers split along ideological lines, with the western powers of what would eventually become NATO aligning against the Union of Soviet Socialist Republics and their Eastern Bloc puppet states.[1] The war pitted the free and capitalist societies of the west against the totalitarian socialist governments of the states under the umbrella of the USSR. Commonly referred to as the Cold War, this conflict lasted that more than forty years and had an all-encompassing impact on the economic, diplomatic, and military strategies of the nations on both sides of the conflict. Throughout the struggle, the United States and its allies adopted and adjusted the strategies of containment and deterrence to prevent military conflict and maintain social and economic pressure on the communist system.[2] The result, the dissolution of the USSR and an end of the bipolar world, was the ultimate vindication for the western powers' strategies.

The successful strategy of containment and deterrence is an excellent model that teaches both positive and negative lessons that are still pertinent in today's multipolar world. The challenges for the United States and its allies today are similar. There is a need to develop a long-term strategy that is effective against current threats and events that one can predict, yet flexible enough to adapt to the unforeseen. The successful integration of all of the elements of national power, societal support, and a viable military deterrent that could succeed when committed all contributed to the success of the Cold War must be repeated. The excessive costs, tripling of

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[1] David F. Schmitz. "Cold War (1945–91)." In John Whiteclay Chambers' *The Oxford Companion to American Military History*. New York: Oxford University Press, 1997, 147-155.

[2] John Lewis Gaddis. *We Now Know: Rethinking Cold War History*. New York: Oxford University Press, 1997, 58.

budgetary deficits and excessive focus of military capabilities on major combat operations must

be avoided.[3]

The United States develops its national security strategy systematically and iteratively,

beginning with a National Security Strategy and then developing diplomatic, economic, and

military strategies to support the grand strategy. The most recent publications pertaining to the

National Military Strategy were the February 2010 Quadrennial Defense Review and the

February 2011 National Military Strategy. These unclassified document are published every four

years and adjust the near to long term strategy for the Department of Defense (DoD) as it looks at

the current conflicts the United States is engaged in and potential future conflicts in the next 20

years.[4] In developing the updated QDR, the Department of Defense relied heavily upon the

National Defense Strategy of 2008 and the strategic outline contained in the National Defense

Budget for 2010.[5] The Quadrennial Defense review states

> America's leadership in this world requires a whole-of-government approach that
> integrates all elements of national power. Agile and flexible U.S. military forces with
> superior capabilities across a broad spectrum of potential operations are a vital
> component of this broad tool set, helping to advance our nation's interests and support
> common goals.[6]

It then identified scenarios representative of the current wars and potential future threats

to develop and validate the capabilities and force structure required to accomplish the Department

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[3] A criticism of the US Department of Defense following the fall of the Taliban in Afghanistan and the overthrow of Saddam Hussein's Baathist regime in Iraq has been that the DoD, and particularly the Army, had failed to develop the skills needed to execute the stability and nation-building needed following a regime change. Instead, equipment and training focus had remained fixed on preparing to fight a major war against the USSR, a threat that has been in decline since the fall of the Berlin Wall in 1989. See Andrew F. Krepinevich's "An Army at the Crossroads" 2008, 10-12, and "General Charles C. Krulak's testimony to the Senate Armed Services Committee on 29 September 1998." http://armed-services.senate. gov/statemnt/980929ck.htm (accessed Dec 4, 2010).

[4] US Department of Defense, "Quadrennial Defense Review Report, February 2010." Washington, DC: Government Printing Office, 2010, 43. Hereafter cited as QDR 2010.

[5] QDR 2010, 1.

[6] QDR 2010, 1.

of Defense's overall mission to "protect the American people and advance our nation's interests."[7] It also attempted to develop a plan that would be sustainable given the current fiscal challenges facing the country.

Ensuring that this strategy is right is critical to the security of the United States. Although the information, economic, diplomatic, and military aspects of national power all play into national security, the nation's military is by far the best resourced and most flexible of government organizations that execute national strategy.[8] This paper will review the current unclassified version of the national military strategy presented in the 2010 Quadrennial Defense Review Report and the 2011 National Military Strategy. The analysis of this strategy will follow the framework for military strategy laid out by the Oxford historian Michael Howard, who breaks military strategy into operational, technical, logistical, and social dimensions.[9] Given the global financial crisis, analysis will focus on the effects of increased resource competition on the current strategy, identify shortcomings in each of the dimensions Howard identifies, and suggest the areas that require the greatest focus to generate an overall effective strategy. Following the logic of the analysis presented, this paper will demonstrate that the current national military strategy

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[7] QDR 2010, iii.

[8] OMB. "Budget of the United States Government, Fiscal Year 2011, Summary Tables." http://www.gpoaccess.gov/usbudget/fy11/index.html (accessed Dec 4, 2010). Comparison of the relative budgets and personnel strength of the departments, which represent the elements of national power, confirm this. The estimated 2011 budget for the Department of state is $56.7 Billion. These funds will enable not only our diplomatic efforts, but also our information efforts as the DOS now includes the Broadcasting Board of Governors (budget $769 million) which assumed the duties of the previously existing US Information Agency as the executing agency for our information operations. Total US contributions to the International Financial Institutions, the agencies through which the US applies its economic power to influence conditions overseas, for the period from 1943 to 2005 was only $98 Billion. Total strength for the Department of State, which includes foreign personnel applied abroad, is only 42,500 personnel. These numbers compare poorly to the Department of Defense's $708 Billion budget for 2011 and 2.1 million personnel. There is no Agency within the US government as well resourced as DOD.

[9] Michael Howard. "The Forgotten Dimensions of Strategy." *Foreign Affairs Summer 79, Vol. 57 Issue ,* 975-986.

requires adjustment. Adjustments are critical to the logistical, technological, and social dimensions if the strategy is to be effective.

The first section of this paper will define the terms used throughout the remaining discussion and address the likely effectiveness of the current defense strategy. Critical to the analysis presented here is defining the criteria that generate a strategy that is likely to be overall effective by defining the criteria needed for success in each of these dimensions. Current doctrine will serve as the basis for outlining the strategy development process in the United States. This paper will then analyze the current military strategy's operational dimension to determine if the capabilities proposed are likely to result in success on the battlefields of today and tomorrow. If the evidence demonstrates that the operational strategy achieves this goal, then it is "successful".

The second section of the paper will evaluate the current defense strategy in the logistical dimension of military strategy. Analysis of historical trends on spending during periods of peace and conflict will predict needed resource levels for military security in the future.[10] The evaluation of the sustainability of the current logistical strategy will consider historic norms, the current fiscal situation in the US, and the resources required of the strategy. To be judged sustainable the logistical strategy must demonstrate that it can resource and sustain the number of operational forces needed to meet projected aggregate security demands. The discussion will then focus on shortcomings with specific emphasis on assumptions that underlie the current strategy.
[11] Recommendations for improving the strategy will include improving efforts to protect against excessive budget cuts, adjusting assumptions that the demand for forces will decrease, and

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[10] OMB, "Budget of the United States Government, Fiscal Year 2011, Summary Tables." Ibid.

[11] Andrew F. Krepinivich, Jr. "National Security Strategy in an Era of Growing Challenges and Resource Constraints." Jun 15, 2010. http://www.csbaonline.org/publications/2010/06/national-security-strategy/ (accessed Oct 10, 2010).

adjusting assumptions on the possibility of borrowing capacity from other government agencies and allies.

The third part of this paper will address the sufficiency of the technological dimension of military strategy presented in the current Quadrennial Defense Review and National Military Strategy. A sufficient technological strategy will affordably integrate enough technology into the military's systems to sustain technological advantages in a timely fashion. Analysis of the reform initiatives that the Department of Defense is building into the procurement and operating process will shed light on current efforts to cut costs and shorten development timelines while ensuring sufficient integration of current technology into the military's weapons and systems.[12]

The final section of this paper will examine the effort that the Department of Defense is making to generate the support required in the social dimension of military strategy. Discussion will focus on critical trends in economics and demographics that are affecting American society. To address considerations that the US public uses when making cost-benefit decisions on military strategies concepts on how casualties affect public opinion are addressed. To explain constraints on the DOD in addressing the social dimension of strategy, analysis will provide a background on historical norms for military professionalism and civil military relations.[13] This analysis will then allow recommendations for improving efforts to ensure the social supportability of the current military strategy.

Defining Effectiveness

Critical to the analysis this paper presents is a shared understanding between the author and the reader on what makes a strategy likely to be effective. Using the framework developed by

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[12] US Department of Defense, 2010. "FY 2010 Enterprise Transition Plan." Washington, DC. http://dcmo.defense.gov/etp/FY2011/shared/docs/FY2011%20ETP.pdf (accessed December 23, 2010).

[13] Samuel P. Huntington. *The Soldier and the State*. Cambridge, MA, Harvard University Press, 1959. Hereafter cited as *The Soldier and the State.*

the preeminent British historian, Michael Howard, this paper will develop a separate definition for what will generate success in each of the four dimensions.[14] Within each dimension, the varying criteria will be defined and then explored to determine if the operational strategy is likely to be success, if the logistical strategy is likely to be sustainable, if the technological strategy is likely to be sufficient, and if the social strategy is likely to be supportable. The analysis will also examine the interdependence of the dimensions to determine if the overall strategy is likely to be effective. The framework developed by Michael Howard was selected for this analysis due to its ability to allow a separate discussion on critical subordinate elements of strategy that apply not only to the military dimension of national power, but to diplomatic, economic, and informational elements as well. Thus the framework enables not only an analysis of the national military strategy, but also an overview or areas where it overlaps or competes with other elements of national power. This level of analysis was not possible using a more military specific framework such as Doctrine, Organization, Training, Material, Leadership and education, Personnel, and Facilities (DOTMLPF) analysis.[15] DOTMLPF analysis provides excellent detail for the military's internal problem solving, but lacks the consideration of larger social and economic issues required to answer the question of what a sustainable military strategy needs to look like. Diplomatic, Information, Military, and Economic (DIME) power analysis was considered, but it

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[14] Michael Howard was a professor at Oxford University, Yale, and King's College. Perhaps most famous for the insightful 1977 translation of "On War" he published with Peter Paret, he also published 20 other major works that address military history and strategy and the sociological impacts of war. He served in World War II, received a military cross for his actions at Salerno, and was knighted in 1986 in recognition of the contributions he had made to understanding history. He is currently president emeritus of the International Institute for Strategic Studies, which he helped establish.

[15] Department of the Army, *FM 1, The Army*. http://www.army.mil/fm1/chapter4.html (accessed 18 Jan 2011). 4-4.

did not provide the discrete details needed to separate important elements of the military element of national power for thorough analysis. [16]

Operational strategy is that essential part of military strategy that is concerned with "how effectively a commander employs the forces at his disposal."[17] A successful strategy in this dimension will generate the properly trained, equipped, and positioned forces needed to prevail on the current and likely future battlefields. Building a successful operational strategy requires identifying current and likely threats to national interests, identifying the capabilities needed to defeat those threats, and then establishing the operational plan to develop the forces that possess those capabilities. The analysis of the current operational defense strategy will evaluate whether the current vision of the threat and the identification of capabilities needed to defeat those threats are complete. A planner cannot guarantee the success of any military unit in some future conflict, but history provides a guide for evaluating the likelihood of success of a well-trained and equipped force against well-understood threats.[18] A wide range of literature on the topics of both threat and capabilities will assist in developing the baseline requirements for a successful operational strategy and predicting the likely success of the DoD's current strategy.

The logistical dimension of military strategy is concerned with the "capacity to bring the largest and best-equipped forces into the operational theater and to maintain them from there."[19] Building on the Prussian military theorist Carl Von Clausewitz's famous differentiation between

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[16]US Department of Defense. *JP 1-02 Department of Defense Dictionary of Military and Associated Terms.* Washington D.C.: GPO, 8 Nov 2010, 178.

[17] Andrew F. Krepinivich, Jr. "National Security Strategy in an Era of Growing Challenges and Resource Constraints." Jun 15, 2010, 2. http://www.csbaonline.org/publications/2010/06/national-security-strategy/ (accessed Oct 10, 2010).

[18] Colin S. Gray. "Coping with Uncertainty: Dilemmas of Defense Planning." *Comparative Strategy*, 27, 324-331, 2008. The renowned strategic theorist Colin Gray develops a thoughtful over view of the difficulty of planning for an unknown future in this piece that emphasizes the contribution history can make to planning while warning of the dangers of assuming the future will look like the present.

[19] Michael Howard. "The Forgotten Dimensions of Strategy." 977.

the art of using a sword and the skill of making a sword, Howard divides the operational act of actually moving to, preparing for, and fighting the battle from the logistic task of raising, equipping, and deploying armed forces.[20] The separation of the two tasks is critical to the development and analysis of strategy as it provides a dividing line between the ways (operational) of going about executing a strategy and the means (logistical) that are available to support the strategy. Maintaining this distinction allows a more thorough evaluation of the national defense strategy, as capabilities that are required but not resourced due to logistical concerns play into risk and the social dimension of strategy. Evaluating the sustainability of the logistical dimension of the current national defense strategy will be based upon an assessment of the current and future costs of the force structure proposed by the Quadrennial Defense Review and the budgetary resources available and projected as being available to sustain it.

The technological dimension of strategy is concerned with integrating improvements in weaponry, transportation, communication, and protection into current military capabilities.[21] The need for the latest and greatest technology is a matter of great controversy in the ongoing debate over national security. Platform-centered services like the Navy and Air Force are consistent in their desire to integrate the latest technology into their planes and ships; however, the long lead-time for these projects can fail to support the fight that is ongoing today. The F-22's cancellation after a production run of only 187 aircraft, well short of the United States Air Force's initial requirement of 750 aircraft, is an excellent example of a runaway program that took 19 years to go from contract selection to the delivery of operational aircraft.[22] Evaluating the sufficiency of the technological dimension of strategy relies on three goals: a) prevent US forces from fighting

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[20] Ibid., 975-977.

[21] Ibid., 977.

[22] David Crane. "F-22 Raptor Program Cancellation: Will We Learn From it?" http://www. defensereview.com/f-22-raptor-program-cancellation-defensereview-weighs-in (accessed Jan 18, 2011).

at a technological disadvantage and sustaining their current advantage, b) be affordable, and c) incorporate new technology into US equipment in a timely fashion to ensure US effectiveness against potential counter measures / capabilities being developed by asymmetric threats.[23] A sufficient technological strategy will balance meeting these three requirements.

Finally, and perhaps most importantly, the social dimension of military strategy needs examination. Drawing upon Clausewitz's remarkable trinity, Howard defines the social dimension of strategy as "the attitude of the people upon whose commitment and readiness for self-denial the logistic power ultimately depended."[24] Examples of the importance of social support for military actions are numerous in history, from the collapse of Tsarist Russia to the political failure in Vietnam that squandered what could have been a military victory.[25] Public opinion matters and the influence that the public has on both the president and the US Congress, who jointly control the US military, are important factors to consider when formulating strategy. A strategy that is supportable within the social dimension of strategy will effectively lay out priorities, explain where risk is assumed, and compete for national resources in a way that is acceptable within the US norms of military professionalism and meets the needs of the other dimensions of strategy. This will determine if the plan is socially sustainable or if it needs adjustment.

This paper will thus determine if the current military strategy is likely to be successful. It will do this by evaluating the sustainability of the logistical dimension, the success of the

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[23] See Robert M. Gates' "Opening Statement on DoD Challenges to the Senate Armed Services Committee, Jan 27, 2009," http://www.defense.gov/speeches/speech.aspx?speechid=1338, (accessed Feb 4, 2011), David E. Johnson's "Military Capabilities for Hybrid War," http://www.rand.org/pubs/occasional_ papers/2010/RAND_OP285.pdf (accessed Dec 4, 2010), and David Crane's "F-22 Raptor Program Cancellation: Will we learn from it?" Ibid.

[24] Michael Howard, Ibid., 977. Carl Von Clausewitz. *On War*. Trans. Michael Howard and Peter Paret. Princeton: Princeton University Press, 1984. I, 1, 89.

[25] Michael Howard, Ibid., 979, 981.

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operational dimension, the sufficiency of the technological dimension, and the supportability of the social dimension. An effective strategy must meet the criteria developed in all four dimensions. In areas where the current strategy is deficient recommendations for improvement, this paper will make recommendations for changes needed to generate an effective overall military strategy.

National Military Operational Strategy

Any discussion of the merits of a nation's defense strategy needs to begin with a discussion on what strategy is. Defining strategy, what it is and what it ought to accomplish, sets the boundaries for analysis that will follow. The Army's *FM 3-0 Operations* provides a definition of the strategic level of war that specifically addresses security objectives and decisions on resourcing. The Army's definition of strategy addresses "the level of war at which a nation…determines national or multinational (alliance or coalition) strategic security objectives and guidance and develops and uses national resources to achieve these objectives."[26] The military does not have a monopoly on strategy, however, and some of the thoughts on strategy from the business world are useful tools when developing a definition for the term. The renowned business and strategy Professor Henry Mintzberg developed the concepts of the strategy that is actively pursued, the deliberate strategy.[27] He then discussed how deliberate strategy interfaces with the strategy that falls out of organizational patterns, which he labeled emergent strategy.

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[26] U.S. Department of the Army, *FM 3-0 Operations*, Washington, D.C.: Government Printing Office, 27 Feb 2008, 6-2. Hereafter cited as FM 3-0. Although there is a DoD joint definition for strategy it is more generically presented as "a prudent idea or set of ideas for employing the instruments of national power in a synchronized and integrated fashion to achieve theater, national, and/or multinational objectives" in *Joint Publication 5-0, Joint Operational Planning*. The Army definition is used as it is more meaningful to the analysis in this paper.

[27] Henry Mintzberg earned both his Masters and PhD from MIT and publishes prolifically on the topics of business and strategy with over 150 articles and 15 books to his credit. He is world renowned for his insights on strategy, the processes that develop it, and where strategies go wrong. http://www.mcgill.ca/about/history/pioneers/mintzberg/ (accessed 19 Jan 2011).

These two strategies combine to form the strategy that an organization typically achieves, the realized strategy.[28] These concepts are important as they explain why successful strategies need to be flexible enough to merge deliberate and emergent strategies into an overall realized strategy to achieve desired outcomes. It also provides the language needed to address the difference between the objectives that are deliberately stated and pursued, and the strategies that emerge from organizational patterns that may or may not be understood and endorsed by decision makers.

Developing the national military strategy begins with identifying the nation's interests. The current overarching National Security Strategy identifies the enduring national interest of the United States as:

> Security: the security of the United States, its citizens, and U.S. allies and partners. Prosperity: A strong, innovative, and growing U.S. economy in an open international economic system that promotes opportunity and prosperity. Values: respect for universal values at home and around the world. International order: An international order advanced by U.S. leadership that promotes peace, security, and opportunity through stronger cooperation to meet global challenges.[29]

These interests become the basis for the Department of Defense as it identifies threats and security objectives as part of its internal strategic review.[30]

Given the foundational importance of the national interests to the development of military strategy and to support future comparisons on threats and required capabilities, a comparison of US national interests to those of other nations is required. The national interests of Japan, the United Kingdom, France, and Russia provide a broad overview of how national interests are seen from the perspective of other cultures and across the majority of the members of the UN Security

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[28] Henry Mintzberg. *The Rise and Fall of Strategic Planning*. New York, NY: The Free Press, 1994, 24-27.

[29] Barack Obama. "National Security Strategy May 2010." Washington, D.C.: Government Printing Office, 2010, 17.

[30] *QDR 2010*, iii.

Council and key US allies. Table I summarizes the results of the analysis of these other national interests as found in official government documents from each nation. As the table demonstrates, the majority of the nations surveyed identified interests that are extremely similar to the four items identified by the United States, suggesting that the work done by the US to identify its interests was successful.

France and the US share the most similarity in the language each used to identify their national interests. France emphasized the "promotion of our economic and commercial interests that will strengthen France as it takes on globalization."[31] The US National Security Strategy (NSS) matches this concept by identifying the importance of "a strong, innovative, and growing U.S. economy in an open international economic system that promotes opportunity and prosperity". Both nations refer to "universal values" and both emphasize the need to work

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[31] *The National Interest*. "Making France a Power for the Future, Part II.*" 2007. http://nationalinterest.org/commentary/making-france-a-power-for-the-future-part-ii-1537 (accessed Jan 18, 2011).

through international organizations and alliances while reserving the right to unilateral action.[32]

Table I - Survey of National Interests					
	Nation				
Interest	United States	United Kingdom	Russia	Japan	France
Security	X	X	X (territorial integrity)	X (China)	X
Prosperity	X	X	X (economy / quality of life)	X	X (globalization)
Values	X	X (specifically "Freedom")	X (democratic and civil society)	X	X (universal human rights)
International Order	X	X (maintain current influence)	X (UN centric)	X (US led)	X (cooperation)
Transform into a World Power			X		

Legend X = interest present in national security document
(area of special emphasis)

The similarity of national interests continues as the United Kingdom's and Japan's thoughts on the topic are compared to the US baseline. The National Security Strategy for the United Kingdom (UK NSS) specifically emphasized "freedom" as the catchphrase that represents their desire to "maintain our way of life" and "the values of our societies and institutions." The UK NSS also emphasizes their desire to "extend our nation's influence in the world" which differs slightly from the US desire to "advance our interests and sustain our leadership." [33] The Japanese expressed their views on national interests in the vision of "Toward Realization of

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[32]The US NSS addresses the thoughts on economic prosperity, universal values, and international organizations on pages 7 and 22. The French thoughts on universal values and international organizations are in "Making France a Power for the Future, Part II" and in "The French White Paper on Defence and National Security" at http://www.ambafrance-ca.org/IMG/pdf/Livre_blanc_Press_kit_english_version.pdf. (accessed Jan 17, 2011).

[33] United Kingdom. "A Strong Britain in an Age of Uncertainty: The National Security Strategy." 2010. http://www.official-documents.gov.uk/ (accessed Nov 11, 2010), 22. Hereafter cited as UK NSS 2010. See also US NSS 2010, 7.

Enlightened National Interest" published by the Democratic Party of Japan in 2005.[34] In this document, the Japanese emphasize the same four interests as the US, but put a specific emphasis on integrating China into the existing international order. The Japanese vision of a more holistic strategy also places increased importance on encouraging the US to operate within international frameworks and avoid unilateral actions to support international institutions and laws.

The Russian National Security Strategy, published in 2009, provides the greatest difference in its view of national interests. The Russian document's specific focus on "territorial integrity" provides insight into how competitors can view security differently, as the Japanese, British, French, and US strategies all emphasize the lack of a current threat to territorial integrity.[35] The Russian point of view on international organizations is also different as it stresses, "Russia perceives the United Nations and the Security Council of the United Nations as a central element of a stable system of international relations, at the basis of which lie respect, equal rights

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[34] Katsuya Okada. "Toward Realization of Enlightened National Interest." 2005. Democratic Party of Japan. http://www.dpj.or.jp/english/vision/document.pdf (accessed Jan 15, 2011). Despite its age this document provides the most coherent statement on national interests and overall strategy that has been published by the Democratic Party of Japan (DPJ). Following the first time election of Yukio Hatomaya as a DPJ Prime Minister in 2009 and the subsequent election of Naoto Kan as only the second DPJ PM there have been no official documents that lay out the thoughs of the DPJ leadership on interests and strategy as well. The ideas present in this document also match the concepts laid out in other official documents retained by the Japanese Ministry of Defense ("Thesis 18, 02-02," http://www.mod.go.jp/j/publication/ronbun/18/02-02.pdf, accessed Dec 3, 2011) and the policy recommendations of the Tokyo Foundation's Shinichi Kitaoka and Akihiko Tanaka (http://www.tokyofoundation.org/en/ additional_info/New% 20Security%20Strategy%20of%20Japan.pdf) which have been written into the current National Defense Program Guideline. ("Summary of National Defense Program Guideline, FY 2011," http://www. mod.go.jp/e/d_act/d_policy/pdf/ summaryFY2011.pdf, accessed Jan 18, 2011).

[35] Russian Federation. "National Security Strategy of the Russian Federation to 2020." 2009, http://rustrans.wikidot.com/russia-s-national-security-strategy-to-2020 (accessed Jan 11, 2011), III.21. Hereafter cited as Russian NSS 2009. The view that the threat to territorial integrity is unlikely is expressed in the following documents: "Japanese Ministry of Defense. Summary of National Defense Program Guidelines, 2011." Ibid. "The French White Paper on defence and national security." Ibid. 6. This document clearly states the geographical context of security occurring away from France itself in four geographic areas and then lays out the need to develop the force projection platforms and sustainment needed to affect these areas. US NSS 2010, 5. The US takes the position that its current conventional superiority makes it highly unlikely that any actor will challenge it in a conventional fight, the resulting emphasis is on force projection, deterrence, and responding to asymmetric threats

and mutually beneficial cooperation among nations."[36]The Russian emphasis on the UN stands in

stark contrast with the US and European countries that focus on NATO and the European Union

(EU) and the US-centric view that Japan takes.[37] The most significant difference between the

interests of the US and any of the nations is also in Russia's expression that it must "transform the

Russian Federation into a world power."[38] This is by far the most ambitious language of any of

the documents and is a reflection of the Russian desire to restore their standing in the world

order.[39]

The comparison of the US statement of national interests to those of four other nations

provides a means to judge the functionality of these interests as the foundation for developing the

national military strategy. Overall, the work done on developing the interests was thorough as

none of the nations selected for comparison identified interests that would apply to the US but

which were missing from its own NSS. There are divergent thoughts, such as Russia's emphasis

on the UN, territorial integrity, and its desire to regain its former status as a world power.

However, these differences occur due to differences in history, geography, and culture, and not

due to any critical oversight on the part of US policy makers in identifying their national

interests.[40] As a start point for the development of military strategy, the national interests

identified by the US in the NSS are sound. [41]

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[36] Russian NSS 2009, II.13.

[37] See US NSS 2010, pages 57-58, UK NSS 2010, pages 4, 10, 15, and Japan's "Summary of National Defense Program Guidelines, FY 2011," 3.

[38] Russian NSS 2009, III.21.

[39] Marcel De Haas. "Medvedev's Security Policy: A Provisional Assessment." 2009. *Russian Analytical Digest #62-09*. http://www.isn.ethz.ch/isn/Digital-Library/Publications/Detail/?lng= en&id=17933 (accessed Jan 11, 2011).

[40] Henning Schroder. "Russia's National Security Strategy to 2020." *Russian Analytical Digest #62-09*. http://www.isn.ethz.ch/isn/Digital-Library/Publications/Detail/?lng= en&id=17933 (accessed Jan 11, 2011).

[41] US NSS 2010, 7.

The next step in determining whether the current US military strategy is operationally

sustainable is to assess the quality of the threat assessment in the document. In a parallel scenario

development process think tank author Evan Montgomery stated: "The future may be

unpredictable, but that does not mean reasonable assessments cannot be undertaken, anticipating

possible challenges and determining the best means to address them are critical steps to

maintaining an effective military over the long run."[42] In the 2010 Quadrennial Defense Review,

the Department of Defense outlined aspects the current environment that are or could develop

into threats. The ongoing conflicts against Al Qaeda and its affiliated networks is the most

pressing threat to the Nation's security. The shifting of global political, economic, and military

power to the rising powers of India and China is also a potential future threat to the Nation's

prosperity. The growth and activity of non-state actors that are increasingly empowered with

capabilities normally reserved for states is a "key feature" of the future. Globalization currently

enables increasing influence and power for non-state actors, allowing them to threaten the

security and prosperity of the US.[43] The proliferation of weapons of mass destruction is also of

great concern to the security interests of the US and its allies, especially given the fact that "Al

Qaeda and other terrorist networks have demonstrated an interest in Weapons of Mass

Destruction" and a willingness to use them.[44] Although the threat of large-scale force-on-force

warfare is currently low, Secretary of Defense Robert Gates recently reminded the defense

community, "The images of Russian tanks rolling into Georgia around August were a reminder

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[42] Evan Braden Montgomery. "Defense Planning for the Long Haul Scenarios, Operational Concepts, and the Future Security Environment." Washington DC, CSBA. 2010. 1. Evan Montgomery is a Doctoral candidate at the University of Virigina and a well-published member of both CSBA and the International Institute for Strategic Studies. The work mentioned here develops scenarios that allow detailed thought on threats and required capabilities for US armed forces.

[43] QDR 2010, 7-8.

[44] QDR 2010, 7.

that nation-states and their militaries do still matter."[45] Hybrid warfare, defined by leading

defense expert Frank Hoffman as a "blend of the lethality of state conflict with the fanatical and

protracted fervor of irregular war" is also an emerging threat to security and prosperity. [46] Hybrid

warfare capabilities enable the enemies and potential future adversaries of the United States to

display willingness to blur the lines of traditional conflict and engage in protracted warfare that

mixes insurgency, proxy forces, non-state actors, and traditional high-end military capabilities to

pursue their own interests.[47] Anti-Access and Area Denial (AA/AD) capabilities that currently

exist or that nations are developing could threaten the access to the global commons that the

United States currently enjoys, to include space and cyber space. These AA/AD capabilities are

defined as: "anti-access (A2) strategies aim to prevent US forces entry into a theater of operations

… area-denial (AD) operations aim to prevent their freedom of action in the more narrow

confines of the area under an enemy's direct control."[48]An adversary or enemy that develops an

effective AA/AD capability, which negates the freedom of maneuver of the US carrier strike

groups and forward-deployed forces operating from fixed bases, would significantly change the

strategic environment. Finally, the collapse of a nation-state could threaten regional security with

global implications as the result of state collapse can generate transfers of WMD, sanctuary areas

for terrorists, a breeding ground for pandemics, and provide a large population receptive to

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[45] Robert M. Gates. "A Balanced Strategy: Reprogramming the Pentagon for a New Age*", Foreign Affairs*, *Vol 88 Issue 1, Jan-Feb 2009*: 28-40.

[46] Frank G. Hoffman. "Conflict in the 21st Century: The Rise of Hybrid Wars." Arlington, VA: Potomac Institute for Policy Studies, 2007, 28.

[47] QDR 2010, 8.

[48] Andrew F. Krepinevich, Jr., Barry Watts and Robert Work. 2003. "Meeting the Anti-Access and Area-Denial Challenge." http://www.csbaonline.org/publications/2003/05/a2ad-anti-access-area-denial/ (accessed 4 Dec, 2010). ii.

extremist messages. A failed state is also a likely scenario given the many pressures on fragile states.[49]

The US DoD then used the identified interests and scenarios that included these current and likely threat forces to develop their list of critical missions and required capabilities.[50] Thus, the success of the future force structure proposed in the QDR is absolutely founded on the accuracy and completeness of the threat analysis performed by DoD. Given the importance of this prediction, the analysis of the sustainability of the operations dimension of the current strategy will begin with an assessment of the completeness and accuracy of DoD's threat analysis.

A wide-ranging review of literature on both national interests and threats to those interests served as the basis for developing a comprehensive baseline against which this paper evaluated the current US threat assessment. Table II – Threats to National Interests, provides a summary of the national interests identified in literature by a number of other nations, qualified experts from academia, and think tanks. The others nations present in Table II are Great Britain, France, Russia, and Japan, which represents a variety of views from the majority of the United Nations Security Council (UNSC) and important allies that the US will have to work with while

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[49] QDR 2010, 9.
[50] QDR 2010, 17.

executing its military strategy.

Interest Threat	US Dept of Def	UK Min of Def	Russian Nat Sec Strategy	US CSBA	Tokyo Institute
Security					
Conventional Military Conflict	Unlikely	Unlikely	Possible	Unlikely	Unlikely 9
Irregular / Insurgency Warfare	Current	Current	Likely	Current	No Mention
Hybrid Warfare	Increasing	Increasing	No Mention	Current	Current
Proliferation of Weapons of Mass Desctuction	Increasing	Current	Current	Current	Current
Attacks Against the Homeland	Increasing	Current	Current	Current	Current
Technological Parity	Increasing	Increasing	Current	Current	Current
Anti-Access / Aerial Denial capabilities	Increasing	Increasing	Not Mentioned	Increasing	Current
Threat from Non-state Actors	Increasing	Greatest Threat	Current	Current	Current
Threat from Terrorism	Current	Current	Current	Current	Current
US Missile Defenses in Europe	No Mention	Opportunity	Current	Opportunity	Current
Prosperity					
Economic competition	Increasing	Increasing	Current	Increasing	Current
Access to Energy	Current	Increasing	Increasing	Current	Current
Access to Cyber Space	Current	Increasing	Current	Current	Current
Access to Global Commons	Current	Increasing	Not Mentioned	Current	Current
Fresh Water	No Mention	Increasing	Current	Current	No Mention
Values					
Basic human rights	Current	Current	Current	Current	Current
Climate change	Current	Current	Current	Current	No Mention
Illegal Trafficking	Current	Current	Current	Current	Current
International Order					
Regional Conflicts	Current	Current	Increasing	Current	Current
Aging Treaties	Current	Current	Current	Current	Current
Modernization of International Law	Current	Current	Current	Current	Current
Weak / Failing States	Ongoing	Current	Current	Current	Current
Rise of China and India	Ongoing	Current	Opportunity	Current	Current
Pandemic / Natural Disaster	Likely	Current	Current	Current	Current

Table II - Threats to National Interests

The threat summary in Table II categorizes the threats based upon the four interests identified in the US NSS and repeated in the 2010 QDR. A thorough reading of the threats identified in the documents of the surveyed nations and think tanks identified ten different threats to the interest of national security. These ten threats are conventional military conflict, irregular and insurgency warfare, hybrid warfare, proliferation of weapons of mass destruction, attacks against the homeland, technological parity, anti-access / area denial capabilities, threats from non-state actors, terrorism, and US missile defenses in Europe. The greatest trend identified in the review was that all of the documents stated that the potential for conventional military conflict was unlikely, although the Russian NSS placed a greater emphasis on threats to its territorial integrity labeling border area conflict as "possible." There were also a few threats that not all of

the parties identified, as Russia makes no mention of the threat of hybrid warfare or of anti-access

area denial capabilities, and the Tokyo Institute's think piece on Japanese national security fails

to identify irregular warfare or insurgency as a threat.[51] Significant agreement exists between the

documents as to the existence or increasing nature of the threat from terrorism, the proliferation

of weapons of mass destruction, adversaries achieving technological parity, and the increasing

threat from non-state actors, which the United Kingdom identified as its greatest current threat.[52]

The greatest disagreement occurring between the documents is how US efforts to develop

effective missile defense technology and then build a shield over Europe is viewed. Russia views

the development of a missile shield as a threat and a violation of existing international

agreements, whereas the UK, the US think tank the Center for Strategic and Budgetary

Assessments, and the Tokyo Foundation all view the development of an effective missile shield

as a positive opportunity to increase their own security.[53]

The review of threats, which challenge national security, leads to an assessment that the

efforts present in the US military strategy and its parent documents were thorough and effective.

The strategy identifies threats ranging from conventional military conflict to the high-end action

of non-state and proxy forces enabled with hybrid capabilities. Differences in how nations view

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[51] Russian NSS 2009, IV.2.24. The NSS makes no mention of hybrid warfare as a defined concept and it also does not identify a concept of threat forces that consist of non-state or proxy forces enabled with high end military capacity normally only seen as part of state aggression as a threat, a significant lack when compared to the rest of the documents surveyed. Shinichi Kitaoka and Akihiko Tanaka. "New Security Strategy of Japan: Multilayered and Cooperative Security Strategy." The Tokyo Foundation. http://www.tokyofoundation.org/en/additional_info/New%20Security%20Strategy%20of%20Japan.pdf. (accessed Jan 12, 2011).

[52] UK Ministry of Defense. "Future Character of Conflict." http://www.mod.uk/DefenceInternet/ MicroSite/DCDC/ (accessed Dec 16, 2010), 16. Hereafter cited as UK FCOC.

[53] See the Russian NSS 2009, II.12, IV.30, the UK's "Securing Britain in an Age of Uncertainty: Strategic Defense and Security Review," http://www.direct.gov.uk/prod_consum_dg/groups/ dg_digitalassets/@dg/@en/documents/digitalasset/dg_191634.pdf (accessed Dec 11, 2010), 28, (hereafter cited as UK SDSR) Andrew F. Krepinevich's "Meeting the Challenges of a Proliferated World," http://www. csbaonline.org/wp-content/uploads/2011/01/2009.10.02-US-Nuclear-Forces.pdf (accessed Dec 4, 2010), 6, and Shinichi Kitaoka and Akihiko Tanaka's "New Security Strategy of Japan," 13-14.

threats as current or increasing exist, but much of the variation results from the US's global role as the major security actor. Despite these variations, there is no major category of threat identified by any of the think tanks or nations surveyed that the US documents overlook. The result is a firm understanding of the threats to the US national interests of security.

The next category of threats examined were threats to national prosperity. Table II lists five separate threat areas that are present in some or all of the documents published by the survey group. It was interesting to note the importance given to prosperity in all of the documents. The UK, CSBA, and the US rightly identify winning the economic competition as essential to maintaining national power.[54] Significantly, Russia's latest NSS likewise increased the emphasis on economic competitiveness to "increasing the quality of life and economic growth," and clearly identified "Russia's ability to defend its national security depended above all on the country's economic potential."[55] Threats that could limit access to energy, referred to variously as "energy security" or by specific mention to the need to "maintain the safety and stability of important resource supply sources," are also emphasized in each document.[56] There is some variation in the language used when the importance of threats which could limit access to the global commons and cyber space are mentioned. However, each of the surveyed institutions addressed the concepts of access to the shared areas of the world and cyber space as threatened areas in the

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[54] See UK NSS 2010, 4; Andrew F. Krepinevich's "National Security Strategy in an Era of Growing Challenges and Resource Constraints," 1-2; and the US NSS 2010, 15.

[55] Marcel De Haas. Ibid., 3. Henning Schröder. Ibid.

[56]See US NSS 2010, 33; Andrew Krepinevich, Robert Martinage and Robert Work's "The Challenges to US National Security," http://www. csbaonline.org/wp-content/uploads/2011/02/2008.08.21-Challenges-to-US-Security.pdf (accessed Dec 11, 2010), page 4; Russian NSS 2009 par IV.4.61; and Shinichi Kitaoka and Tanaka Akihiko's "New Security Strategy of Japan: Multilayered and Cooperative Security Strategy." 7.

current security environment.[57] One area of variance was that the UK, Russia, and the CSBA identified the threat of limited access to fresh water as a threat to prosperity and a potential spark for regional conflict.[58] This thought only recently and marginally appeared in the 2011 National Military Strategy. The failure to identify water as a potential threat to prosperity and spark for security conflict could lead the US to miss warnings or indicators that regional conflict is likely, however this gap is not serious, as the US clearly identified regional conflicts as a threat its national security interests.[59] Overall, the US analysis of the threats to its prosperity appear complete enough to serve as a functional foundation for identifying needed defense capabilities.

Analysis of threats to the national interest of promoting one's values revealed the greatest agreement among the actors considered in the survey. The documents analyzed identified three important shared values: basic human rights, climate change, and illegal trafficking. Threats to basic human rights are both an internal and external issue. Internally, the measures taken to provide security are a potential threat to the internal value of human rights such as privacy and personal freedom.[60] Externally, the threat of basic human rights to national values is how the perception of a nation's actions either support or erode its credibility in this area and the idea that

[57] The global commons is defined as "the "shared sea, air, and space domains…, which exist outside exclusive national jurisdictions" in the US NSS 2010, 49. For the varying views on the importance of the global commons and cyber space, see the US NSS 2010, 22, 49; the UK NSS 2010, 11; the FCOC, 3-4, the Russian NSS 2009, II.10, IV.1.30, IV.4.57; Andrew F. Krepinivich's testimony to Congress "The War in Afghanistan in Strategic Context" http://www.csbaonline.org/wp-content/uploads/2011/02 /2009. 11.17-Afghanistan-War.pdf (accessed Dec 3, 2011), 7; and his "Current Threats to US National Security," 4; and "New Security Strategy of Japan," 6-7.

[58] The UK NSS 2010, 3, 17; the Russian NSS 2009, IV.4.57; and Andrew F. Krepinevich's "The Challenges to US National Security," 39; all identify increasing competition over access to fresh water as important to a nation's prosperity and as a likely trigger for future regional conflicts. "The National Military Strategy of the United States of America 2011 Redefining America's Military Leadership," http://www.jcs.mil//content/files/2011-02/020811084800_2011_NMS_-_08_FEB_2011.pdf (accessed Feb 9, 2011) only mentions the topic of water scarcity in passing. 2.

[59] US QDR 2010, 42.

[60] See the UK NSS 2010 page 23, US NSS 2010 page 27, Russian NSS 2009 para. IV.3.53.

the spread of basic human rights throughout the world supports peace and security.[61] All of the surveyed nations except Japan specifically addressed climate change as a threat.[62] Finally, each nation addressed the need to improve international law and countermeasures to combat illegal trafficking that threatens to undermine values through the movement of drugs, people, and technology. Thus, the development of the threats to values as a national interest appears to be without significant oversight or error and it will support the development of an effective military strategy for the US.

The last set of threats examined is those that threaten the International Order. The survey of the identified strategy papers identified six different threats to the international order. These threats are regional conflicts, aging treaties, failures to modernize international law, weak and failing states, the rise of China and India, and pandemics / natural disasters. Once again, there is strong concurrence as to the nature of these threats as viewed by each of the strategies surveyed. The issues associated with the failure of both international institutions / law, here defined as bilateral or multilateral relationships between countries, and treaties to keep pace with modernization and globalization are of particular emphasis. The UK recognizes this as not just a need to " reinforce existing international institutions such as the UN and the emerging ones such as the G20 so as to preserve the best of the rules-based international system," but also as a way to support their values, deal with the rise of China and India, and support their continued economic prosperity.[63] Russia emphasizes the need to look at multilateral security relationships calling

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[61] See the US NSS 201 pages 2, 10, 70 and the UK NSS 2020 pages 4 and 23.

[62] Japan's history of focusing on environmental issues is strong, its understanding of climate change as a potential threat is underscored by its status as a signatory to the Kyoto Protocols (http://unfccc.int/kyoto_protocol/items/2830.php) and its recent ranking as 20th out of over 160 countries on the Environmental Performance Index (http://epi.yale.edu/Countries). However, Shinichi Kitaoka and Akihiko Tanaka's "New Security Strategy of Japan" focused on military security and the US alliance, likely resulting in the lack of a mention on climate change as a threat to the Japanese national values.

[63] UK NSS 2010, 15.

current structures inadequate, too centered on NATO, and a threat to security.[64] The US also

identifies an important issue in that there is a "shortage of political will that has at times stymied

the enforcement of international norms."[65] This is an extremely important point given the

emphasis on the global nature of threats and the need to support national values by acting within

existing international institutions and laws for which many of the surveyed nations state a

preference.[66] The work of the Tokyo Foundation is particularly interesting in its view of the

central importance of updating its alliance with the US to sustain stable international relations in

Asia. The reliance upon the US as a guarantor and source of resources for international security

provides a counterpoint to the US desire to rely more upon international partners, a tension that

will be examined in the logistical dimension of strategy.[67] At the macro level, these varying views

of the threats to the existing international order provide an excellent overview of not only threats

to which the US will have to respond, but also of the interconnected nature of the threats and

potential responses to those threats across of the identified national interests.

The next step in evaluating the success of the operational dimension of the current US

military strategy is to determine if the capabilities outlined in the strategy are sufficient to

mitigate the stated threats. To ensure the United States military is ready to meet these threats, the

Department of Defense developed four priority security objectives to ensure its ability to

accomplish its mission, which is "to protect the American people and advance our nation's

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[64] Russian NSS 2009, II.9.

[65] US NSS 2010, 3.

[66] See the US NSS 2010 page 12, Dr. Eric S. Edelman's "Understanding America's Contested Primacy" http://www.csbaonline.org/wp-content/uploads/2010/10/2010.10.21-Understanding-Americas-Contested-Supremacy.pdf (accessed Dec 11, 2010), page 8, UK SDSR 2010, pages 59-63, and the Russian NSS 2009, Para. II.11-13. All detail the need to act within the context of larger international organizations to achieve global affects and support global security interests in the areas of counter proliferation, dealing with international crime, energy law and access, and countering natural disasters and pandemics.

[67]Shinichi Kitaoka and Akihiko Tanaka. Ibid. 17.

interests."[68] These security objectives are identified as: a) prevailing in today's' wars, b) preventing and deterring conflict, c) preparing to defeat adversaries and succeed in a wide range of contingencies, d) and preserving the all-volunteer force.[69] These priorities are critical to the analysis of both the operational and logistical dimension of strategy as "These shape not only considerations on the capabilities our Armed Forced need but also the aggregate capacity required to accomplish their missions now and in the future."[70] The fiscal challenges faced by the United States play into balancing the resources available to support these four priority objectives, a concept that will receive more attention later. DoD balanced the application of resources and risk by analyzing different future force structures against a standard set of scenarios. This analysis led to the DoD recommendation to

> rebalance its policy, doctrine and capabilities to better support the following six key missions: 1) Defend the United States and support civil authorities at home; 2) Succeed in counterinsurgency, stability, and counterterrorism operations; 3) Build the security capacity of partner states; 4) Deter and defeat aggression in anti-access environments; 5) Prevent proliferation and counter weapons of mass destruction; and 6) Operate effectively in cyberspace.*[71]*

DOD performed analysis on the capabilities required to succeed in the six key mission areas against the current force structure's capabilities. Capability shortfalls were identified and this gap was used to develop guidance to rebalance resourcing priorities and development projects. The end state of this analysis identified two trends that the QDR addressed.[72]

The first trends is that DoD needs to rebalance the use of resources and the priority of development projects to adjust the existing force structure to meet the current and projected future

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[68] QDR 2010, iii.

[69] Ibid., 11-15.

[70] Ibid., v.

[71] Ibid., 17.

[72] Ibid., x.

threats. Table III lists the QDR directed initiatives that the DoD is recommending to Congress

and the President for implementation.[73]

Key Mission Area QDR Directed Initiative to improve capabilities	Required Solution		
	Training	Organization	Equipment
1. Defend the US, support civil cuthorities at home			
Improve responsiveness and flexibility of consequence management response forces	X		
Enhance capabilities for domain awareness	X		X
Accelerate the development of standoff radiological/nuclear detection capabilities			X
Enhance domestic counter improvised explosive device (IED) capabilities	X		X
2. Succeed in Counterinsurgency, stability, and counterterrorism operations			
Increase the availablitiy of rotary winged assets		X	X
Expand manned and unmanned aircraft systems (UASs) for interlligence, surveillance, and reconnaissance (ISR)		X	X
Increase key enabling assets for special operations forces (SOF)		X	X
Increase counterinsurgenc, stability operations, and counterterrorism competency and capacity in general purpose forces	X	X	X
Increase regional expertise for Afghanistan and Pakistan	X		
Strengthen key supporting capabilities for strategic communication	X	X	X
3. Build the security capacity of partner states			
Strengthen and institutionalize general purpose force capalities for Security Force Assistance	X		X
Enhance linguistic, regional, and cultural capacility	X		
Strengthen and expand capabilities for training parnter aviation forces	X	X	X
Strengthen capacities for ministerial-level training	X	X	
Create mechanisms to expedite acquisition/transfer of critical capabiltiies to partner forces		X	
4. Deter and defeat aggression in andi-access environments			
Expand future long-range strike capabilities			X
Exploit advantages in subsurface operations	X		
Increase the resiliency of US forward posture and base infrastructure			X
Assure access to space and the use of space assets			X
Enhance the robustness of key ISR capabilities			X
Defeat enemy sensors and engagement systems	X		X
Ehance the presence and responsiveness of US forces abroad	X		
5. Prevent proliferation and couter weapons of mass destruction			
Establish a Joint Task Force Ellmination HQs to plan/train/execute WMD-elimination operations		X	
Research coutnermeasures and defense to nontraditional agents		X	
Enhance nuclear forensics	X		X
Secure vulnerable nuclear materials		X	
Expand the biological threat reduction program		X	
Develop new verification technologies			X
6. Operate effectively in cyberspace			
Develop a more comprehensive approach to DoD operations in cyberspace		X	
Develop greater cyber expertise and awareness	X	X	
Centralize command of cyber operations		X	
Enhance partnerships with other agencies and governments	X	X	

Table III – QDR Directed Initiatives to Support Key Mission Areas

Table III further denotes if the initiative creates a training requirement, an organizational

requirement (that can create a new organization to handle the mission or task an existing

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[73] Ibid., 21-26.

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organization with the mission), or an equipment requirement. As can be seen several of the initiatives create all three requirements, and many more than one. At the macro level, the 2010 QDR thus creates an adjustment to the existing military strategy that will implement 16 training initiatives, 16 organizational requirements, and 17 equipment requirements. This large rebalancing effort is surprising in that the initiatives and adjustments are also predicted to be possible within a resource environment that will allow this scope of change without an increase in budget or manpower.

Many defense experts view the wide reach of this rebalancing effort as a welcome change. Recent critiques of the US DoD stated that the DOD had committed a strategic error by allowing the patterns it was required to execute in the past to support ongoing counterinsurgency and stability operations to become too great a portion of its realized strategy. A 2010 RAND study on hybrid warfare noted,

> The U.S. military, particularly its ground forces, has made significant adaptations to its high-end warfighting skills in response to the IW environments in Afghanistan and Iraq.[3] This adaptation is evident in the implementation of a new counterinsurgency (COIN) doctrine that has markedly increased U.S. effectiveness in both of these wars. Nevertheless, the opponents the United States and its partners have faced in Afghanistan and Iraq have limited military capabilities, especially in the realms of training, organization, equipment, and command and control (C2).[74]

Other defense experts joined in these claims by pointing out that while the US was fully committed to current operations other nations were continuing to develop their own capabilities. The CSBA paper entitled *"Why AirSea Battle"* addresses the need for the US DoD to reassess its power projection capabilities given the increased AA/AD capabilities of China and to a lesser

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[74] David E. Johnson. "Military Capabilities for Hybrid War." http://www.rand.org/ content/dam/rand/pubs/occasional_papers/2010/RAND_OP285.pdf (accessed Nov 11, 2010), 1.

extent Iran.[75] The current QDR addresses the criticisms of "Why Air Sea Battle?" through the

identification of the capabilities initiatives designed to accomplish the key mission of defeating

and deterring aggression in anti-access environments.[76]

The second trend noted in the capabilities review was that US forces would need to

remain flexible enough to operate across the required range of mission required in the six key

mission areas. The QDR states that "our future operational environment is likely to entail

complex combinations of multiple challenges" and that "U.S. forces must be sized and shaped to

provide the maximum possible versatility for the broadest plausible range of conflicts."[77] Simply

stating this requirement, however, fails to acknowledge significant debate on the issue of how

broad a range of mission that one type of force or unit can accomplish.[78]

The need for US forces to be able to operate across the full spectrum of operations grew

out of the formal assignment of stability operations as a mission that US forces need to be ready

to "conduct… support… and lead," to more complete thoughts such as the Army's new operating

concept. The new concept requires the Army to "provide …capabilities across the range of

military operations in both domestic and foreign contexts." [79] These requirement and doctrinal

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[75] Andrew F. Krepinevich, Jr. "Why AirSea Battle?" http://www.csbaonline.org/4Publications/ PubLibrary/R.20100219.Why_AirSea_Battle/R.20100219.Why_AirSea_Battle.pdf (accessed Sep 21, 2010), 5-10.

[76] QDR 2010, 31-34.

[77] US QDR 2010, 15.

[78] The depth of the debate on this topic is too great to address completely in this monograph but a mention is required to acknowledge that the debate exists and has resulted in assumptions in DOD's current force structure model and training strategies. The Army's current training strategy (https://atn.army. mil/act_ searchResults.cfm?searchtermDotNet=army%20training%20strategy, accessed 4 Dec, 2010) and TRADOC's "The Army Operating Concept" (http://www-tradoc.army.mil/tpubs/pams/tp525-3-1.pdf, accessed Jan 11, 2011) provide insight into the Army's methodology for addressing this as a training issue. Opposing viewpoints are found in Frederick Donnelly and Donald Kagan's *Ground Truth, The Future of U.S. Land Power* (Washington, D.C.: AEI Press, 2008) and Andrew F. Krepinevich's "National Security Challenges in an era of Growing Challenges and Resource Constraints." (Ibid.).

[79] The US Army defines full spectrum operations as an operational concept that requires units to execute missions that simultaneously combine offensive, defensive, and stability or civil support operations

changes leave no doubt that future operations will require a broader skill set of military forces. The 2010 QDR also formalizes this requirement as it tasks ground forces to be capable of full spectrum operations and adds tasks to the Navy and Air Force to develop platforms and be prepared to execute security training with partner air forces and navies while simultaneously developing a new joint air-sea battle concept.[80] Previously the Department of Defense, and particularly the Army, preferred to limit its mission and designed its forces to deal primarily with conventional military threats. The current security environment and missions call for a wider range of capabilities, but this wide-ranging requirement comes at a time when DoD faces "limitations on its size imposed by fiscal constraints and its all-volunteer character."[81] Despite the challenges this creates for the services, the military strategy published by DoD continues to encourage the view expressed in the 1996 CJCS document that

> Our forces have been largely organized, trained, and equipped to defeat military forces of our potential adversaries. Direct combat against an enemy's armed forces is the most demanding and complex set of requirements we have faced. Other operations from humanitarian assistance in peacetime through peace operations in a near hostile environment have proved to be possible using forces optimized for wartime effectiveness.[82]

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to achieve success across the full spectrum of conflict from stable peace to general war. US Army. *FM 3-0 Operations*. Washington, DC. GPO, Feb 2008, 2-5, 3-1. The formal requirement to train equally for stability and combat operations first appeared in the US Department of Defense "Instruction Number 3000.05 Stability Operations*" (found at* http://www.dtic.mil/whs/directives/corres/pdf/300005p.pdf, accessed 31 Jan 2011) and has begun appearing in current service doctrine such as the Army's "TRADOC Pam 525-3-1, The United States Army Operating Concept 2016-2028*" (*Washington, DC, 19 August 2010, 8).

[80] US QDR 2010, x., 31.

[81] Andrew F. Krepinevich. "An Army at the Crossroads." http://www.csbaonline.org/publications /2008/12/an-army-at-the-crossroads/ (accessed 4 Dec, 2011). 2008, xii-xiii, 65. This paper addresses both the Army's focus on major combat operations and the coming budgetary pressures that will shape the environment that the national military strategy exists in.

[82] Chairman of the Joint Chiefs of Staff, "Joint Vision 2010." http://www.dtic.mil/jv2010/ jvpub.htm (accessed Jan 11, 2011), 17.

Many challenge the concept that a service can provide one unit as the answer to all of the myriad challenges present in full spectrum operation. Defense experts such as Andrew F. Krepinevich, Thomas Donnelly, and Frederick W. Kagan argue that the full spectrum is unrealistic and that it is unlikely that DoD will generate individual units that can operate on "disparate missions on short notice, and at a high level of effectiveness?"[83] In all cases, the arguments against fielding full spectrum forces are more related to the logistic dimension of strategy, as DoD has demonstrated operational success in both conventional combat and stability operations and the critical question is whether DoD can resource specialized forces for each skill set.

The assessment of the operational dimension of the military strategy outlined in the 2010 QDR is that it is successful. Returning to the original definition of success for the operational dimension, the review of the national interests and threats that served as the foundation for identifying the required capabilities contained no major flaws or omissions. The QDR then laid out a force structure that possesses the capabilities to both deter and counter the threats to the national interests as identified. The QDR identified shortfalls in critical capabilities and reprioritized resources to create or expand existing training and equipping programs to address these shortfalls. Although not a perfect solution, the strategy clearly identified its priorities, the ongoing conflicts in Afghanistan and Iraq, and the risk associated with delaying preparation for potential future threats that results from a current operations focus.[84] Within the operational dimension of strategy, there is little doubt that the operational concepts outlined in the 2010 QDR

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[83] Andrew F. Krepinevich, Jr., Ibid, 48. See also Richard A. Lacquement Jr's "In the Army Now" in the Sep-Oct issues of *The American Interest* found at http://www.the-american-interest.com/article.cfm?piece=860 (accessed Feb 11, 2011) and the Congressional Research Services report "Does the Army Need a Full-Spectrum Force or Specialized Units?" 48, at http://www.fas.org/sgp/crs/natsec/RL34333.pdf (accessed Jan 19, 2011).

[84] QDR 2010, 97.

will create a force that is trained, equipped, and positioned to successfully deter, meet, and defeat the threats to national interests.[85]

The Quadrennial Defense Review goes into detail on threat, capabilities, priorities, and risk. The result is a force structure list that identifies the forces that each major service will field through the year 2015. This complete force structure is enclosed at Appendix 1, but it generally provides for: 45 Active Component (AC) and 28 Reserve Component (RC) Brigade Combat Teams (BCTs) for the Army, eleven aircraft carriers and 310 ships for the Navy, eleven infantry regiments for the United States Marine Corps, 21 combat aircraft wings for the United States Air Force, and 660 special operations teams for United States Special Operations Command.[86] These forces become the means with which the United States will seek to advance and defend its interests at home and overseas for at least the next five to seven years. [87] In the operational dimension of strategy, the evidence suggests that this force structure will be successful, the next question to address is will it prove to be logistically sustainable?

National Military Logistical Strategy

Determining if the current US military strategy is logistically sustainable requires a careful review of the capacity that will be required versus the resources that are available to generate that capacity. A logistically sustainable strategy will ensure the US has the capacity to "bring the largest and best-equipped forces into the operational theater and to maintain them there."[88] The 2010 QDR makes a clear delineation between the operational capabilities of the force structure it proposes and the "capacity needed to prevail in a series of overlapping

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[85] Ibid., 13.

[86] Ibid., xvi-xvii.

[87] QDR 2010, 43.

[88] Michael Howard. "The Forgotten Dimensions of Strategy." Ibid. 977.

operations of varying character and intensity."[89] Following the test against these scenarios, the

DoD published the force structure guidance included as Appendix A as the approved force

structure that provides the capacity needed to operate against multiple complex threats in

different regions of the world simultaneously. [90] The following analysis will look at events since

the publication of the QDR, analysis from defense experts, and opinions from academia to

determine if the published force structure will really suffice. Will the proposed force structure

provide the quantity of properly-equipped forces needed to succeed operationally in all expected

missions? In addition, will it be able to sustain these forces through the expected duration of the

missions? Finally, are the resources, both budgetary and manpower, available to develop this

capacity?

Thorough research into the topic of resourcing the US military strategy determined there

are two key questions that surround the issue of how much capacity is enough. The first question

is whether any strategy can really succeed given the US global commitments and its current role

as "the world's only super power."[91] Is it even conceivable that the US DoD could, with a

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[89] QDR 2010, 3, 41-43. DoD used three scenarios to develop the force structure model that verified the required aggregate capacity of the force. All three scenarios required multiple operations in different locations. The scenarios variously stressed the force to demonstrate the capacity to simultaneously respond to a mix of stability operations, support to domestic civil authorities, long duration counterinsurgency and counterterrorist operations, and a fight requiring the joint and combined arms proficiency required to defeat a highly capable regional aggressor.

[90] Ibid., 43-47.

[91] Although there is great debate on this topic, this paper sides with those that believe the US is the sole global superpower. The definition of super power proposed by Lyman Miller of Stanford is that a "superpower" is a country that has the capacity to project dominating power and influence anywhere in the world, and sometimes, in more than one region of the globe at a time, and so may plausibly attain the status of global hegemon." ("China an emerging superpower?" http://www.stanford.edu /group/sjir /6.1.03_miller.html, accessed Feb 2, 2011). There is widespread agreement that the US is the sole nation able to project and sustain large contingents of military power globally (US QDR 2010, iv) and that US forces are unmatched in "conventional warfare capabilities (*Deficits, Debts, and Defense, a Way Forward* report of the Sustainable Defense Task Force, 2010, vii – hereafter cited as Deficits, Debts, and Defense). Thus, the arguments against the US as the sole superpower are currently insufficient to overcome the evidence that it is. Charles Krauthammer's piece *The Unipolar Moment Revisited* provides an excellent overview or both sides of this issue (*The National Interest*, Dec 2002, 5-17).

reasonable budget, create a military force that would possess the required capabilities in the needed quantities to succeed? Alternatively, as some insist, will the "imperial overstretch" represented by the US's current global commitments overcome any superpower?[92] Once the possibility of accomplishing the task has been determined, the next question is whether the strategy laid out in the 2010 QDR is likely to sustain the success of the military instrument of national power against the future threats it envisions.

Research shows that there is nothing that prevents the US from developing, equipping, fielding, and sustaining the military capacity needed to face today's challenges. Three main points support this conclusion. The first is that the US has demonstrated that it possesses the military capacity to support two large long duration military operations while still executing a number of other deterrence and crisis reaction missions over the ten years since 2001.[93] It has done so while operating with incredible efficiency, requiring just over four percent of the US gross domestic product as a ten-year average from 2001 through 2010.[94] The fact that the military has been able to sustain intense combat operations, stability operations, and crisis response operations in multiple theaters for a period of ten years while requiring little above historically normal operating expenses is an achievement that many experts regard as remarkable.[95]

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[92] Paul Kennedy. *The Rise and Fall of the Great Powers*. New York, Random House, 1987, 515.

[93] Currently the United states maintains a forward deployed force of over 400,000 military members in support of major operations such as Operation New Dawn in Iraq, Operation Enduring Freedom in Afghanistan. Simultaneously it conducts numerous prevent and deter missions such as Combined Joint Task Force Horn of Africa and has responded to several unexpected crises such as the relief provided following earthquakes and flooding in Pakistan in 2005 and 2010 respectively. The complete list of operations that have occurred in conjunction with operations in Iraq and Afghanistan is too extensive to list here, but the volume of missions is a testament to DoD's true capacity.

[94] OMB. "Historical Tables Budget of the US Government Fiscal Year 2010*."* Washington, D.C.: GPO, 2010, 24-25, 47-55. Also see chart II.

[95] See Andrew F. Krepinivich's "National Security Strategy in an Era of Growing Challenges and Resource Constraints." Ibid. 3-4.

There are arguments against this achievement. A primary argument against it is the sheer size of the budget that 4% of US Gross Domestic Product generates for the US DoD. Although the US is not the world leader in terms of the amount of GDP it dedicates to defense, 4.2% of the US GDP will generate close to $740 billion for the US defense budget in 2011. [96] $740 billion is the equivalent of the next top six countries in terms of total spending on defense. This suggests that the US investment in security is more than China, India, Russia, Saudi Arabia, and France are willing to commit as a group.[97] Those that make this argument use this fact to support their theory that the current US commitments to defense creates a situation where a "penchant for projecting power has created as many problems as it has solved. Genuinely decisive outcomes remain rare, costs often far exceed expectations, and unintended and unwelcome consequences are legion."[98] This school of thought holds that "the real need is to wean the United States from its infatuation with military power and come to a more modest appreciation of what force can and cannot do."[99] The supposed preference for the use of force over other instruments of national power -- diplomacy, economic, and informational -- is however, an argument that centers on the nation's grand strategy, and the US NSS addresses this issue at length.[100] Thus, arguments over the

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[96] The CIA Factbook put the US at 24th in terms of percentage of GDP dedicated to defense based upon 2005-2006 estimates, https://www.cia.gov/library/publications/the-world-factbook/rankorder/ 2034rank.html (accessed Feb 2, 2011).

[97]The data used for this analysis came from the Global Security's estimates for 2011, which used CIA GDP and defense spending data adjusted for Purchasing Power Parity. Global Security noted that the Chinese estimate was the most questionable due to a lack of transparency on government expenditures in China. http://www.globalsecurity.org/military/world/spending.htm (accessed Feb 4, 2011).

[98] Andrew J. Bacevich. "The Limits of Power Projection." *Foreign Affairs Nov/Dec 2009.* http://www.foreignaffairs.com/articles/65233/andrew-j-bacevich/the-limits-of-power-projection (accessed Feb 3, 2011).

[99] Andrew J Bacevich. Ibid.

[100] US NSS 2010. See pages 14-16 for an in depth discussion of how the nation's overall security strategy envisions improving a "Whole of Government Approach" and working to "pursue our interests through an international system in which all nations have certain rights and responsibilities." (p. 1) Much of the language presented in the NSS is repeated in the QDR.

correctness of the amount of resources provided to the military have little to do with whether or not the military strategy is achievable, and all evidence presented suggests that at a resource level of around 4% of US GDP, the strategy is both achievable and sustainable. Indeed, military experts from the Center for Strategic and Budgetary Assessments, normally associated with increasing the capabilities of the military, have argued at length against setting 4% of GDP as a base funding level for the military as it would provide excessive resources in the long term.[101] After all, the military has demonstrated over the last ten years that it is capable of projecting and sustaining a force of 400,000 DoD personnel in multiple locations while executing a broad range of missions, thereby meeting the requirement of its operational strategy. The QDR also makes adjustments required to better support ongoing operations and to fill identified capability gaps to better prepare for likely future operations. Adjustments to the nation's grand strategy may be desirable, but there is nothing in recent history to suggest that the US cannot support the capacity that the DoD requires in the current QDR.

Having determined that it is possible to sustain logistically the operations that the US DoD is likely to face in the future, the next question is whether the strategy contained in the QDR is likely to achieve this possibility. Evidence based upon actions, and changes in the environment that occurred following the publication of the QDR, suggest that it will prove to be logistically unsustainable without several major modifications. The adjustments must address changes in the assumptions that were essential to the analysis underlying the QDR. The first of these assumptions addresses the strategy to deal with increasing budget pressures and deficits by

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[101] See Steven M. Kosiak. "Analysis of Proposals to Allocate Four Percent of GDP to Defense," Sep 9, 2008. http://www.csbaonline.org/publications/ (accessed Dec 3, 2010) and The Sustainable Defense Task Force, Debts, Deficits, and Defense. 2.

implementing internal cost saving measures.[102] The second addresses the QDR assumption that

demand for forces would decrease as operations in Iraq wind down, allowing it to meet force

rotation goals needed to sustain the all-volunteer force.[103] The third is that cooperation with

intergovernmental agencies and allies will allow manpower savings. These underlying

assumptions are increasingly challenged by events both internal to and external to the US.[104]

Secretary of Defense Robert Gates has been outspoken on the topic of what federal

deficits and increasing budget pressure will mean to the DoD. In February of 2010, defending his

2011 budget request in front of the Senate Armed Services Committee, he warned, "That said, I

would tell you that if the Department of Defense received significant reductions in its budget, that

we would have to sacrifice force structure. We cannot do it any other way. And so the result of

that would be a reduction in military capability and a reduction in our flexibility."[105] However,

Secretary Gates also approached the problem realistically, identifying internal efficiency issues

that the DoD had to address to reassure Congress and the public that DoD will "make every

defense dollar count."[106] The DoD preemptive strike on predicted future budget cuts included

QDR 2010 proposals to reduce force levels in the Army by 22,000 and stop procurement of

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[102] QDR 2010, 75-80. Four cost savings initiatives are addressed, developing people, ensuring integrity of the acquisition process, bolstering cost analysis, improving program execution, and lowering military health care costs.

[103] Ibid., 44 addresses the assumption of decreasing demand and "a period of less- intensive sustained operations." Page xii and 45 address the desired rotation schedule and how the assumed decrease in operations will support this.

[104] Ibid., 3, 10, and 30 all address the requirement to "build a whole of government approach" and "craft an approach to the U.S. defense posture that emphasizes cooperation with allies and partners.

[105] Robert M. Gates and ADM Mike Mullen. "Testimony Regarding Senate Armed Services Committee FY 2011 Defense Authorization Request." http://www.jcs.mil/speech.aspx?ID=1321 (accessed 4 Feb 2011).

[106] US DoD. "DOD Announces $150 Billion Reinvestment from Efficiencies Saving". News Release Jan 26, 011. http://www.defense.gov/releases/release.aspx?releaseid=14178 (accessed Feb 4, 2011).

systems that DoD deemed low priority or that were overcome with cost overruns and delays.[107] Unfortunately, current events demonstrate that these initial measures were inadequate to protect DoD from federal budget pressures, as cuts to defense spending have been included in recent budget proposals.[108]

To understand the nature of the budget pressures that the US faces it is necessary to put both the deficits that the US is running and the impact of the global financial crisis on other nations' defense spending in perspective. Table IV provides a graphic depiction of trends that affect the federal deficit, overall federal budget, and specific budgets for Social Security, Medicare, and defense. The chart annotates key aspects of trends in the different budget areas. Significant spikes in defense spending on the chart resulted from wars. Additionally, the chart identifies the metaphorical Rubicon crossed in 1976 when spending on Social Security and Medicare exceeded spending on defense for the first time. The trend line for deficit spending is also significant. Despite the fact that the overall history of the US budget is one of surplus throughout the first two hundred years, recent events break with this tradition.[109] The trend to run deficits, as depicted by the blue line in Table IV, is a more recent phenomena generally attributed to a combination of decreased revenues due to tax cuts or recession and an increase in spending due to increases in defense and programmatic spending. In the most recent years, programmatic spending has increased to support social programs and interest payments on the federal debt.[110]

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[107] QDR 2010, 40, programs recommended for deletion or restructuring included the Army's Future Combat System, the Navy's DDG-100 program, and the Air Force's F-22 and C-17 programs.

[108] Marcus Weisgerber and Kate Brannen. "Gates Details $13.6B in DoD Cuts But Some Projected 'Savings' Not What They Seem." *DefenseNews*, March 21, 2011, 1.

[109] OMB. "Historical Tables Budget of the US Government Fiscal Year 2010." Washington, DC. GPO, 2010, 24-25, 5.

[110] OMB. Ibid. 6.

The US policy of financing its government's operations through increased debt spending is of enormous concern. Paul Kennedy points to the depth of this problem in his classic work *The Rise and Fall of the Great Powers* (emphasis in the original):

> The only way the United States can pay its way in the world is by importing ever-larger sums of capital, which has transformed it from being the world's largest creditor to the world's largest debtor nation *in the space of a few years*. Compounding this problem-in the view of many critics, causing this problem – have been the budgetary policies of the U. S. Government itself. Even in the 1960s, there was a tendency for Washington to rely upon deficit finance, rather than additional taxes, to pay for the increasing costs of defense and social programs.[111]
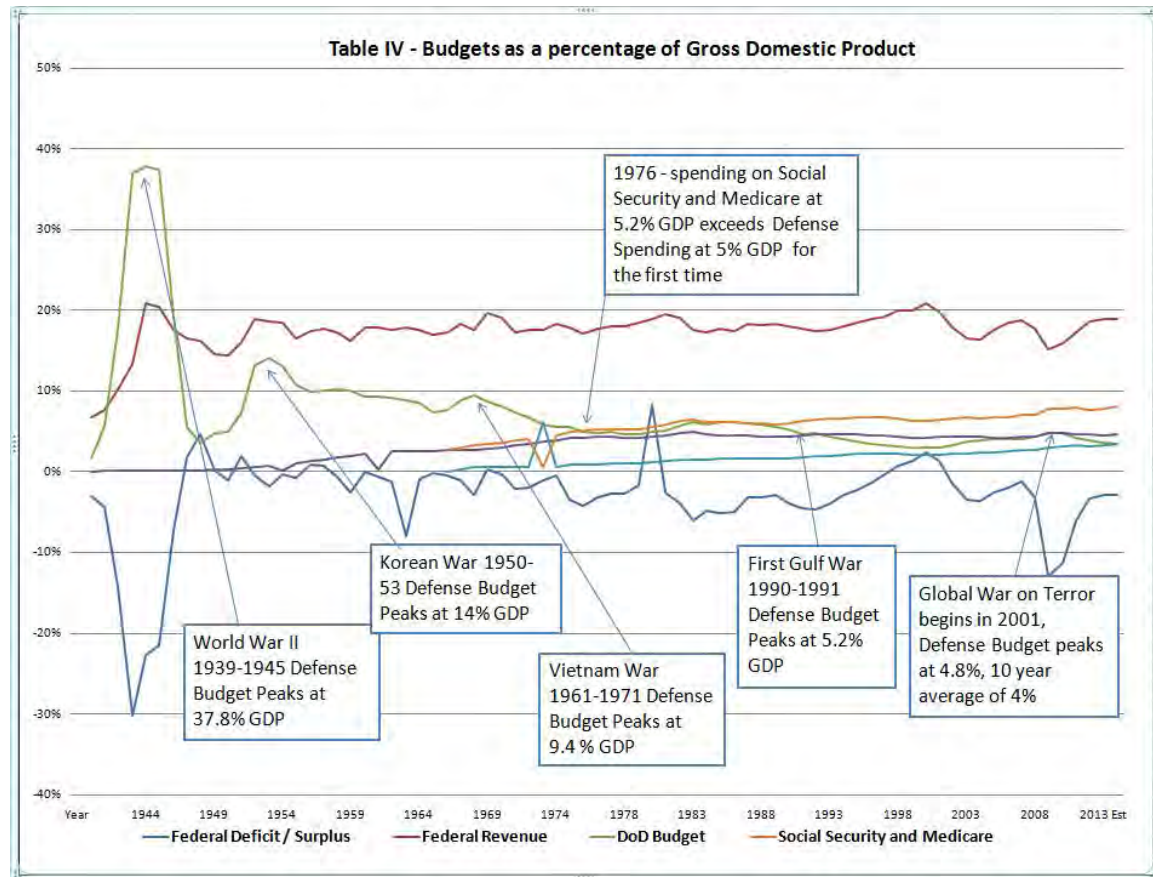
Kennedy predicted in 1987 that this lack of economic discipline would lead to a relative decline in the power of the US, primarily because of overspending on defense.[112] The trend lines present in Table IV support the conclusion that something must be done about spending and deficits, but point to a cause other than runaway defense spending. The root of the problem lies in the areas of social programs and debt, not runaway defense spending or sharp drops in

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[111] Paul Kennedy. *The Rise and Fall of the Great Powers.* 526-527. When he published this seminal work Kennedy was concerned that a DoD budget which represented 7.5% of GDP would be difficult to sustain based upon the trend from 1953 to 1972 of DoD Budgets above 7% of GDP. However, the trend since 1987 has been for the DoD budget to be below 6% of GDP, even during periods of war. Kennedy's 1987 analysis also over predicted federal deficits anticipating a federal deficit of $13 Trillion in the year 2000, a figure not reached until 2010.

[112] Ibid., 533-34.

government revenues.

Table IV - Budgets as a percentage of Gross Domestic Product

1976 - spending on Social Security and Medicare at 5.2% GDP exceeds Defense Spending at 5% GDP for the first time

World War II 1939-1945 Defense Budget Peaks at 37.8% GDP

Korean War 1950-53 Defense Budget Peaks at 14% GDP

Vietnam War 1961-1971 Defense Budget Peaks at 9.4 % GDP

First Gulf War 1990-1991 Defense Budget Peaks at 5.2% GDP

Global War on Terror begins in 2001, Defense Budget peaks at 4.8%, 10 year average of 4%

Federal Deficit / Surplus — Federal Revenue — DoD Budget — Social Security and Medicare

Thus, the real cause of the budgetary pressure on the DoD's logistical strategy is not defense spending, but rather what Andrew Krepinivich calls "entitlement overstretch."[113] He also summarizes why this pressure will only get worse in the short term as an aging population creates a simultaneous effect of increasing social security and Medicare/Medicaid expenditures for an aging and retired population while simultaneously cutting government tax receipts due to a decrease in the overall workforce. The government's recent moves to increase rather than limit entitlement programs, extend tax reductions, and provide stimulus spending will only exacerbate

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[113] Andrew F. Krepinevich, Jr., "National Security Strategy in an Era of Growing Challenges and Resource Constraints." Ibid., 4.

these problems. [114] Overcoming these non-defense budgetary issues will require difficult work for Secretary Gates and others in this and following administrations. They will have to determine exactly what the public is willing to sacrifice to support the requirements of the logistical dimension of strategy, a question that the section on the social dimension of strategy will address in detail.[115]

The second assumption that must be addressed dealt is a decreased demand in force levels that will allow the DoD to achieve its desired rotation rate of two years home for every year deployed for Active Component (AC) forces and five years home for every year deployed for Reserve Component (RC) forces.[116] In addition to achieving the desired rotation schedule, the decreased demand for forces is assumed to allow an increase in the execution of prevent and deter missions "through forward presence and sustained operations to build partnership capacity."[117] However, changes to the proposed force structure on both the civilian and military sides of the DoD have already occurred because of congressional pressures on the defense budget. As a result, Secretary Gates recently announced an additional cut in the Army of 27,000 soldiers and in the Marine Corps of 15-20,000 Marines.[118] Secretary Gates is also dealing with the results of an internal Pentagon task force that recommended cutting the DoD civilian workforce by more than 111,000 personnel, a move that stands in stark contrast to the QDR's stated goal of hiring "20,000 new acquisition professionals, filling 9,000 new jobs and 11,000 converted contractor

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[114] Ibid., 4.

[115] Michael Howard. Ibid., 977.

[116] QDR 2010, xii.

[117] Ibid., 44.

[118] Karen Parrish. "DOD Directs Army, Marine Drawdowns for 2015, 2016." *American Forces Press Service*, Jan 6, 2011. http://www.defense.gov/news/newsarticle.aspx?id=62355 (accessed Feb 4, 2011).

positions.[119] Changes to end strengths in the armed services that approach ten percent of the force and that may approach 15% of the DoD civilian work force will require the DoD to relook its force structure model and determine if the operational mission can still be supported within the rotation desired rotational model. If it cannot, DoD must either ask for the funds to cover increased personnel costs or increase the risk it is willing to assume to the All Volunteer Force (AVF) force because of decreased home station time between deployments.

The final assumption that deserves a reassessment deals with the DoD's ability to address manpower and specialty skill shortages by receiving increased cooperation from other US government agencies and from allied nations.[120] In 2008, Secretary Gates stated that "To truly achieve victory as Clausewitz defined it to attain a political objective, the U.S. needs a military whose ability to kick down the door is matched by its ability to clean up the mess and even rebuild the house afterward."[121] Unfortunately there are skills that are required to "rebuild the house" that are in short supply everywhere in government. This challenge of looking for augmentation from sources outside the US military repeats itself when the US asks allied nations for military forces to assist in prevent, deter, and stability missions.[122] DoD needs to change the assumptions and reconsider the overall strategy to adjust for these emerging realities.

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[119] QDR 2010, 93.

[120] QDR 2010. 44.

[121] Robert M. Gates. "A Balanced Strategy: Reprogramming the Pentagon for a New Age." *Foreign Affairs, 88.1*. Jan-Feb 2009, 13.

[122] The trend in allied countries has been to under fund defense spending since the fall of the Soviet Union. As a result, there has been little work done to fill the need for low density high demand equipment such as helicopters in other countries ("Remarks as Delivered by Secretary of Defense Robert M. Gates, National Defense University, Washington, D.C., Tuesday, February 23, 2010." http://www. defense.gov/speeches/speech.aspx?speechid=1423, accessed Nov 24, 2010), and recent budget cuts will do little to fix the problem. There are opposing views that look at the deficits and defense cuts in Europe as an opportunity to create efficiency (Council of the European Union, "Council Conclusions on Military Capability Development," http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/EN/foraff /118347.pdf, accessed Feb 6, 2011) and develop greater expeditionary capacity for the European Union and

The QDR contains no fewer than eleven references to a whole of government approach and another six which emphasize the need to integrate all of the elements of national power to achieve sustainable success.[123] In this area, it repeats the emphasis of the overarching National Security Strategy that devoted three pages to explaining its vision for interagency cooperation to develop a whole of government approach.[124] Unfortunately, the attempts to create the increased interagency capacity for diplomacy, development, intelligence, and homeland security are all competing for the same personnel and budget dollars as the DoD.

The struggles of the Department of State (DoS) are an excellent example of how difficult it will be for the DoD to receive the assistance it needs from other government agencies to achieve a true whole of government approach. In its own Quadrennial Diplomacy and Development Review of 2010 the DOS finds

> A soon-to-be-released Stimson Report sponsored by the American Academy of Diplomacy notes that "[i]n late 2008, more than one of every six Foreign Service jobs worldwide went unfilled. In high-hardship posts (excluding Iraq), 17 percent of Foreign Service Officer positions were vacant, and 34 percent of mid-level positions were filled by officers one or two grades below the position grade. Training suffered and skills were not up to standard...." [125]

The shortage of required personnel to accomplish the mission comes as no surprise to experts in the field of History like Harvard Professor Niall Ferguson who proposed, "one of the most serious difficulties the United States currently faces is its chronic manpower deficit. There

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NATO, these projection are rife with optimism and will do nothing to overcome the current lack of allied capability in the near to mid-term.

[123] QDR 2010, 6.

[124] US NSS 2010, 14-16.

[125] US Department of State. "The First Quadrennial Diplomacy and Development Review 2010." Washington, DC: GPO, 2010, 161.

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are simply not enough Americans out there to make nation building work."[126] Other government

agencies that the DoD strategy looks to for expert personnel suffer from similar shortages.[127]

The ability to rely upon allies to provide additional military forces, equipment, or civilian

experts as a means of outsourcing some of the US security requirements is also doubtful. Recent

experience in attempting to increase the trainers needed to build the Afghan Army showed a

shortage of 18% in general instructor positions and 36% in critical instructor positions. A GOA

report into the shortage found that "NATO cited several causes for the shortage of instructors,

including low levels of political support for the Afghan mission in some NATO countries and the

potential difficulty of financially supporting a troop presence abroad during the current global

economic downturn."[128] The shortage of trainers for Afghanistan is only the tip of the iceberg

when considering the difficulty of receiving military support from allied nations. Budget concerns

in Europe have led to a steady dismantling of military capability among NATO members, some

of the US's closest allies. Defense cuts in the United Kingdom will reduce the Ministry of

Defense by 42,000 personnel, retire the UK's only aircraft carrier and the entire fleet of Harrier

jets, scrap the Nimrod reconnaissance aircraft, and reduce the size of the force package that the

UK can deploy and sustain by 25%. Similar cuts in France, Germany, and Spain will make it

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[126] Niall Ferguson. *Colossus, The Price of America's Empire.* New York: Penguin Press, 2004, 208.

[127] See Matthew Harwood's "Staffing Shortages at FBI Hamper Financial Crime Investigations *,"* Oct 20, 2008 at http://www.securitymanagement.com/news/ (accessed Feb 5, 2011), Jay Solomon's "Training for the Civilian Surge," *The Wall Street Journal*, Dec 18, 2009, A3, and Carol Moore's "When Good Cops go to War," in *Law Enforcement Technology,* May 2007. Moore's piece points out not only shortage issues, but also how the military and other departments in the US often compete for the same qualified personnel, creating real dilemmas when it comes time to mobilize reservists and stateside departments lose their experienced personnel and are forced to rely upon temporary hires.

[128] United States Government Accountability Office. "Afghanistan Security, Afghan Army Growing, but Additional Trainers Needed; Long-term Costs Not Determined." Jan 27, 2011, http://www.gao.gov/ new.items/ d1166.pdf (accessed 4 Feb 2011), 25.

difficult for the US to depend upon allies for troops and capabilities it is cutting internally.[129] The

failure of all but four of NATO's members to meet the goal of committing 2% of GDP

underscores the legitimacy of the concern that the demilitarization of Europe will leave the US

without strategic partners that can fight.[130]

There is little doubt that the US currently has the resources to develop the military

capacity needed to support its operational success. Although deficits are increasing budgetary

pressures, the DoD's demonstrated ability to field its current force structure with a budget of

about 4% of US GDP is sustainable.[131] Cutting the defense budget is also not a viable solution for

overall budget problems as defense is only 19% of current federal spending and is not scheduled

to increase at the rates of interest payments and social spending.[132] The real issue that affects the

logistic dimension of strategy is not what is possible, but what is bearable. The social dimension

of strategy must determine the balance between defense spending, social program spending, and

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[129] See the following works for an overview of how budget cuts are affecting European defense capabilities: Anthony Faiola's "British Military Faces Deep Cuts." *Washington Post Foreign Service*. Oct 20, 2010. http://www.washingtonpost.com/wp-dyn/content/article/2010/10/19/AR2010101907367.html (accessed Feb 4, 2011); Pierre Tran's "France To Cut Spending $4.8B Over 3 Years." http://www.defense news.com/story.php?i=4799913 (accessed Feb 4, 2011); UPI's "German Military Faces Drastic Budget Cuts" May 27, 2010. http://www.upi.com/Business_News/Security-Industry/201 0/05/27/ German-military-faces-drastic-budget-cuts/UPI-82361274987146/ (accessed Feb 4, 2011); SpainReview.net. "Spanish Defense Ministry Cuts Budget by 3.5 Billion," Oct 11, 2010. http://www. spainreview.net /index.php/2010/10/11/ spanish-defense-ministry-cuts-budget-by-3-5/ (accessed Feb 4, 2011).

[130]Gary Schmitt. "The Demilitarization of Europe." *The Wall Street Journal*. Oct 6, 2010. http://online.wsj.com/article/SB10001424052748704631504575531722614613144.html (accessed Feb 5, 2011) and "German Defense Minister Reveals Military Reform" from the Trumpet.com, Aug 24, 2010, which reveals that of Germanys 252,000 military members only 7-8,000 are capable of deploying overseas. http://www.thetrumpet.com/?q=7438.6013.0.0 (accessed Feb 4, 2011).

[131] See Andrew Krepinevich's "National Security Strategy in an Ear of Growing Challenges and Resource Constraints," 4; Steven Kosiak's "Analysis of Proposals to Allocate Four Percent of GDP to Defense," 3-5, and the DoD news release No 010-11 "DOD Announces $150 Billion Reinvestment from Efficiencies Savings."

[132] Office of Management and Budget, "A New Era in Responsibility: Renewing America's Promise." 2010. http://www.gpoaccess.gov/usbudget/fy10/pdf/fy10-newera.pdf (accessed Dec 11, 2010), 119. Defense spending is about 19% of federal spending, social spending on Medicare, Medicade, and Social Security exceeds defense spending already, interest payments on the federal debt increase rapidly to draw close to defense spending in 2019, and defense spending remains relatively flat.

taxation rates that the American people will support to answer the question of how the budget crisis will affect military strategy. In the meantime, at current funding levels, it is possible that DoD can field and sustain the capacity of operational forces needed today and in the near future.

Logistical sustainability is possible, but for the current military strategy to be likely to achieve this possibility, adjustments are necessary. The first adjustment must address the strategy to protect the defense budget against excessive cuts. The current strategy assumes that internal cost savings measures to demonstrate fiscal responsibility will suffice. Evidence on the unwillingness of politicians to cut social programs or raise taxes suggests that these internal measures will not suffice. [133] A more energetic social strategy to develop the will of the people to support the defense strategy over social spending, or alternatively to support higher taxes to sustain both, is needed. This will be analyzed in detail in the section of this paper on the social dimension of strategy.

Recent events challenge the assumptions on the future increased availability of forces that will increase home station time and support for prevent / deter missions. The surge of troops to Afghanistan and unprogrammed troop cuts announced in January of 2011 mean that DoD must either change its assumptions on rotation cycles, decrease projected support for future prevent / deter missions, or ask Congress for increased personnel authorizations and funds. [134] Finally, the issue of assumptions on borrowing manpower must be addressed. Personnel and skill shortages within other agencies of the US government will limit the whole of government approach that is central to the QDR's prevent and deter approach. US allies have also aggravated limited initial

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[133] Paul Kennedy. *The Rise and Fall of the Great Powers*. 527.

[134] Charles Keyes. "Defense Secretary announces billions in defense cuts." Jan 6, 2011. http://articles.cnn.com/2011-01-06/politics/ (accessed Feb 4, 2011).

funding levels for defense by executing another round of recent manpower and budget cuts.[135] The US DoD will also find borrowing personnel, equipment, or funds from allies to meet global security requirements difficult. These trends mean DoD must relook the current strategies reliance on interagency and allied support. The capabilities that the current logistical strategy expects to be available from partners may need internal resourcing instead.

National Military Technological Strategy

A successful technological strategy is one that ensures that a nation's military forces are equipped with the equipment needed to prevent fighting at an operational disadvantage.[136] History contains numerous examples of battles decided by the technological advantage that one force possessed over another. The Allied ability to both break the Enigma code and locate German submarines with radar is only one example of how a technological advantage can turn the tide of a battle.[137] A sufficient technological strategy for the US must meet a higher standard than the baseline proposed by Michael Howard. This higher standard is due to the position of technological superiority that the US currently occupies. Thus a sufficient technological strategy will achieve three goals: a) prevent US forces from fighting at a technological disadvantage and sustaining their current advantage, b) be affordable, and c) incorporate new technology into US equipment in a timely fashion to ensure US effectiveness against potential counter measures / capabilities being developed by asymmetric threats.[138] Given the incredibly wide array of

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[135] Gary Schmitt. "The Demilitarization of Europe." 2010.

[136] Michael Howard. "The Forgotten Dimensions of Strategy." 978.

[137]Marc Milner. "The Battle that had to be Won." *Naval History; Jun2008, Vol. 22 Issue 3*, p12-21. The allied ability to break German codes were a key advantage in the fight to protect allied shipping against the predations of German U-boats in the Atlantic. Combined with other technological advances such as radar it gave allied fleets an edge that attritted the German U-boat wolf packs to the point of ineffectiveness.

[138] See Robert M. Gates' "Opening Statement on DoD Challenges to the Senate Armed Services Committee, Jan 27, 2009," http://www.defense.gov/speeches/speech.aspx?speechid=1338 (accessed Feb 4,

technology used to support current military forces, a limited number of examples will illustrate how the technological strategy of the US attempts to accomplish these goals. The examples will include the development of the Mine Resistant Ambush Protective Vehicle (MRAP) and the procurement of the F-22 Raptor fighter.

The first of these goals, sustaining US technological advantages while preventing US disadvantages, is a challenging task. Predictive efforts must anticipate emerging technology that could be leveraged into a threat capability early enough to allow the development of effective deterrents or countermeasures, with major platforms requiring increased lead-time. Simultaneous efforts must advance existing areas in which the US possesses advantages in order to sustain them as countermeasures are developed and technology spreads to potential adversaries.[139] The MRAP is an example of an effort designed to react to an enemy technological advance that temporarily put US forces at a disadvantage. Responding to the increased use of IEDs by insurgents in Iraq, DoD initially responded with the Up-Armored High Mobility Multipurpose Wheeled Vehicles (UAHs). The enemy regained their advantage by increasing the size of their explosive charge, using Explosively Formed Penetrators (EFP), and changing to triggering devices that were not vulnerable to Radio Frequency (RF) jamming.[140] The US technological response to this relatively low-technology threat was to increase the protection provided to US forces through the rapid

2011); David E. Johnson, "Military Capabilities for Hybrid War"; and David Crane, "F-22 Raptor Program Cancellation: Will we learn from it?"

[139] Michael Howard. "The forgotten Dimensions of Strategy," 978; Barry Watts. "The US Defense Industrial Base Past, Present and Future." 2008. http://www.csbaonline.org/wp-content/uploads/2011/02/2008.10.15-Defense-Industrial-Base.pdf (accessed Dec 11, 2010), 46.

[140] Welch, Al. "Iraq, the Evolution of the IED." http://www.cbrneworld.com/pdf/08_autumn_IRAQ_EVOLUTION_OF_THE_IED.pdf (accessed Feb 15, 2011).

acquisition of the MRAP line of vehicles.[141] Secretary Gates commented on the effectiveness of the MRAP program in 2009 by emphasizing, "In Iraq, the majority of our combat deaths and injuries have been a result of road-side bombs, IEDs, and explosively formed penetrators. The casualty rate from an attack on an MRAP is less than one-third that of Humvees, and less than half that of an Abrams tank." [142]

The Development of the F-22 fighter is an example of the other end of this spectrum, sustaining an existing US technological advantage. The US fourth generation fighters, such as the F-15 and F-18, were widely recognized as very capable air superiority fighters, but other nations were developing aircraft with similar, if not better, capabilities.[143] The US F-117 stealth fighter was a first in the development of stealth fighters, but by its retirement in 2008, its dated technology was beginning to show its age. To prevent developments in Russian aircraft technology from surpassing US capabilities, the USAF procured the F-22 Raptor. The first F-22s were delivered in 2001, and in testing against modern Russian airframes in 2008 at a USAF Red

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[141] Specific protective improvements present in the MRAP line of vehicles include increased stand off from the ground, a V-shaped hull to dissipate blasts, and enlarged windows to allow occupants to better view their surroundings during patrols and to return fire during ambushes. "General Dynamics Wins MRAP Order of its Own." http://www.defenseindustrydaily .com/general-dynamics-wins-mrap-orders-of-its-own-03598/ (accessed Apr 2, 2011).

[142] US DoD. "Submitted Statement Senate Armed Services Committee Tuesday, January 27, 2009, 9:30 AM." http://armed-services.senate.gov/statemnt/2009/January/Gates%2001-27-09.pdf (accessed Dec 3, 2010), 9.

[143] The US developed their workhorse fighters such as the F-15 and F-18 using 1970s technology and first flew them in 1972 and 1978 respectively. In comparison, Russia first flew the SU-30 in 1989. During its development the USAF viewed it as a legitimate threat to the F-15s role as "a long range air superiority fighter with the performance to kill any other tactical aircraft and the operating radius to threaten targets deep inside the USSR while flying from bases in Western Europe." Global Security.org. "F-22 Raptor History." http://www. globalsecurity.org/military/systems/aircraft/f-22-history.htm (accessed Feb 15, 2011).

Flag exercise, the F-22 demonstrated a clear superiority over the " Indian Air Force … top of the line Su-30MKIs."[144] In this area, the F-22 was an obvious success.

The MRAP and F-22 both demonstrated that DoD's technological strategy can meet its first goal, so the next test for a technological strategy is whether it is affordable. Generating and sustaining the technological advances seen in the MRAP and F-22 comes at a cost, and in this area, the sufficiency of the technological strategy impacts the logistical strategy in the area of affordability. After all, DoD does not always meet the goal of sustaining a technological edge at the least cost. Although the US DoD would like to have the latest and greatest technology available incorporated into each weapon system, that is not always fiscally possible. The rapid increase in the cost of developing new military equipment is not, however, a new problem. Paul Kennedy noted it as a significant concern in 1987 stating, "each new generation of aircraft, warships, and tanks is vastly more expensive than preceding ones, even when allowance is made of inflation." Compounding Kennedy's concern on increasing prices is the separation of the military industries from normal market competition that creates a situation where "the entire Pentagon budget may be swallowed up on *one* aircraft by the year 2020."[145] Unfortunately, for DoD both the F-22 and the MRAP are examples of programs which require enormous budgets to deliver the latest and greatest technology. The MRAP was a program that occurred outside of the normal acquisition process and although it delivered the results desired, it did not do so efficiently or cheaply. A study of the MRAP acquisition process praised its ability to deliver over 16,000 vehicles in three years but determined that this success was due to "the almost perfect alignment

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[144]Terrence Fornof. "Red Flag 2008-4."(Lecture) http://vayu-sena.indianmilitaryhistory.org/ exercise-red- flag-su-30mki-comparison-fornof.shtml (accessed Feb 15, 2011). Key performance enhancements for this twin-engine air superiority fighter include supercruise, maneuver advantage, acceleration, reliability, low observability and integrated and advanced avionics package "that will guarantee U.S. air dominance for the next forty years." http://www.f22-raptor.com/technology/index.html (accessed Apr 2, 2011).

[145] Paul Kennedy. *The Rise and Fall of the Great Powers*. 442-443.

of favorable circumstances that contributed to the success of the program—consistent support

from the highest level and an almost unlimited budget." At a cost of $30 Billion for the first

16,000 vehicles (or an average of $1.8 million per vehicle), the MRAP has not been a bargain.[146]

The F-22 provides a similar example as the Air Forces initial request was for 648 aircraft at an

expected cost of $86.6 Billion.[147] Historically and as these two recent examples show, it has been

difficult for DoD to sustain their technological advantages in an affordable manner.

The final requirement for the DoD's military strategy to be technologically sufficient is

that it delivers the technology required in a timely manner. In this area, a timely manner is

defined as delivering the technological advances when US forces need them to ensure they do not

fight at a technological disadvantage or have to give up an advantage which they formerly

possessed. In the case of the MRAP, it did not meet this requirement despite the speed of its

eventual acquisition process. The reports excoriating DoD for their failure to predict the IED

threat and for unacceptable delays in funding purchases of MRAPs are many. In particular the

USMC's decision in 2005 not to buy MRAPs but instead to buy additional UAHs, which did not

provide the increased protection needed to save Marines' lives, was publicly used as an example

of DoD's failure to provide the correct technology to its service members in a timely manner.[148]

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[146]Thomas H. Miller. "Does MRAP Provide a Model for Acquisition Reform?" *Defense AT&L: July-August 2010.* http://www.dau.mil/pubscats/Lists/ATL%20Database/Attachments/715/Miller_jul-aug10.pdf (accessed Feb 11, 2011). At $1.8 million per unit, the cost of fielding MRAPs to one armor battalion requiring 63 MRAPs would exceed the FY 2000 training budget for an entire armored division of $115 million. GAO. "DEFENSE BUDGET Need to Better Inform Congress on Funding for Army Division Training." http://www.gao.gov/new.items/d01902.pdf (accessed Apr 2, 2011), 10.

[147]The history of the F-22 notes that " during the 1991 Advanced Tactical Fighter (ATF) Milestone II review…the Air Force planned to acquire 648 F-22 operational aircraft at a cost of $86.6 billion. After the Bottom Up Review, completed by DOD in September 1993, DoD reduced the planned quantity of F-22s to 442 at an estimated cost of $71.6 billion. "F-22 Raptor History." Ibid.

[148] See the "Results in Brief: Marine Corps Implementation of the Urgent Universal Needs Process for Mine Resistant Ambush Protected Vehicles" completed by the DoD IG in 2009. Although the full report is still For Official Use Only, this unrestricted summary finds that "DoD did not develop requirements for, fund, or acquire MRAP-type vehicles for low-intensity conflicts that involved mines and

The acquisition process for the F-22 is another example of the inability of DoD's past

technological strategy to deliver technologically sufficient capabilities in a timely manner. The

failure of the F-22 program in this regard is evident in two areas. The first is the length of time

that it took to deliver the first F-22. Following the first flight of the Russian SU-30s in 1984, there

was no doubt that Russia was challenging the technological superiority of US air supremacy

fighters. The USAF formally requested production of what was to become the F-22 Raptor in

1986, but it took more than 16 years for the procurement to go from contractor selection in 1989

to the delivery of the F-22 into service in 2005. During this delay, the Russians developed and

delivered the initial SU-30 in 1989 and followed up with an improved SU-30 MKI in 2000.

Exacerbating this delayed development cycle is the fact that the commitment of procurement

resources to the F-22 may have suppressed and slowed down delivery of interim upgrades such as

low-observability/stealth, flight and fire controls, and canards for super maneuverability to

existing fighter platforms.[149] Regardless of their eventual success and impressive capabilities, the

MRAP and F-22 programs are not examples of DoD's technology acquisition process delivering

technology in a timely fashion.

The case studies of the MRAP and F-22 have demonstrated some of the characteristics of

DoD's technological strategy prior to the publication of the current QDR and NMS. Despite

displaying the ability to generate a technological advantage for the US, as demonstrated in the F-

22s display of aerial superiority in 2008, the system struggles. Specific problems with the

immense costs of projects and the amount of time it can take to deliver a usable weapon system to

IEDs. As a result, the Department entered into operations in Iraq without having taken available steps to acquire technology to mitigate the known mine and IED risk to soldiers and Marines. http://www.dodig.mil/Audit/reports/ fy09/09-030RIB2.pdf (accessed Feb 10, 2011).

[149] David Crane. "F-22 Raptor Program Cancellation: Will we learn from it?"

the field prevent the current system from meeting the definition of sufficiency introduced at the beginning of this section. The real question for DoD's current military strategy is whether it sufficiently addresses these weaknesses to create a technological strategy that is likely to generate sufficiency in the future.

The QDR readily acknowledges the existence of problems with the growing costs of DoD acquisition projects and the length of time it takes to deliver them to the services. Secretary Gates addressed the issues of timeliness and excessive costs in numerous speeches. These statements lay out the framework for the execution of the current technological strategy that is designed to overcome these historical flaws. The keys to overcoming what Secretary Gates called:

> Entrenched attitudes throughout the government [that] are particularly pronounced in the area of acquisition: a risk-averse culture, a litigious process, parochial interests, excessive and changing requirements, budget churn and instability, and sometimes adversarial relationships within the Department of Defense and between Defense and other parts of the government.[150]

consist of: a) investing in the acquisition work force, b) improving cost estimates, c) improving program execution, d) institutionalizing rapid acquisition capability, and e) strengthening the industrial base.[151]

The 2010 QDR and numerous statements from Secretary Gates and his assistant Deputy Secretary of Defense William J. Lynn III develop the details of this five-part plan to address these historical problems. Overall, the plan is sound, as it addresses the breadth and width of the problem. Starting with the need to hire and improve the training of the acquisition personnel, it will address the fact that the acquisition work force, which has averaged more than 13%

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[150] Robert M. Gates. "Opening Statement on DoD Challenges to the Senate Armed Services Committee, Jan 27, 2009." Ibid.

[151] For comments on these goals, see the US QDR 2010, 78-81; Secretary Gates' "Opening Statement on DoD Challenges to Senate Armed Services Committee, Jan 27, 2009."

vacancies, has seen its workload tripled in the last decade. Steps to improve cost estimates through the training of government workers and the use of independent experts and estimates will help overcome current problems with cost overruns due to actual development costs outpacing the current optimistic and inaccurate estimates. Current reforms address poor program execution by locking requirements at contract award, preventing the current malaise of requirement creep that creates a spiral of escalating cost and growing delays. Institutionalizing rapid acquisition capabilities will fill the gap in the current process and enable the acquisition of equipment within the Planning, Programming, Budgeting, and Executing System (PPBES). This will meet the need to provide technological solution to service members in the fight to meet their critical needs, and not according to an existing schedule that suits the government's bureaucracy. Final reforms will improve relations with the industrial base to "rely on market forces to create, shape and sustain industrial and technological capabilities" rather than sustaining the existing system that has "consolidated and contracted around 20th-century platforms."[152] Overall, the planned strategy seems sufficient to generate significant improvements in the technological strategy, but its chances of success are not yet known.

Secretary Gates has noted that: "Since the end of World War II, there have been nearly 130 studies on these problems – to little avail. While there is no silver bullet, I do believe we can make headway."[153] The concern that reforming the system may be an impossible task is one shared by many defense experts. Two separate reports analyzing the 2010 QDR found that the

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[152] The QDR 2010 addresses these reforms and initiatives in depth and provides the quotes from this passage on page 81. Although it is beyond the scope of this paper to address every initiative aimed at improving the acquisition process, in the QDR, public statements, and supporting plans DoD has developed a significant and interrelated effort to improve all aspects of the acquisition process. See also the "FY 2011 Enterprise Transition Plan" for an overview of the processes in place to modernize and improve aspects of the procurement process (http://dcmo.defense.gov/etp/FY2011/home.html, accessed Feb 18, 2011).

[153] Robert M. Gates. "Opening Statement on DoD Challenges to Senate Armed Services Committee, Jan 27, 2009."

proposals it included were a good start, but likely to be insufficient to generate real cost savings and improvements in timeliness and effectiveness. They emphasized a need for better "line management" of acquisition programs to generate future successes like the F-15A, F-117, and B-1B, all of which arrived on time and within cost estimates.[154] However, Secretary Gates seeks this improvement in project management in his proposed reforms. The passage of the Weapons System Acquisition Reform Act (WSARA) of 2009 and the successful cancellation of underperforming programs in 2010 and 2011 provides the best evidence that the current reform efforts are likely to succeed.

The WSARA is a key indicator of likely success because it allows the DoD to cancel projects that run more than 25% over expected costs or even if a program is projected to exceed this 25% limit. It also creates the office of Cost Assessment and Program Evaluation (CAPE), other oversight positions, and clearly lays out their authorities.[155] Legitimate concerns that the CAPE will be as toothless an organization as the one it replaced are overcome by the success that DoD has enjoyed in 2010 cutting underperforming programs. The list of large projects cancelled by DoD, despite congressional and public support, includes the curtailment of F-22 purchases, the restructuring of the Army's Future Combat System (FCS) program and the Navy's DDG-1000 destroyer, and the cancellation of the USAF's second engine for the F-35 fighter. The successful cancellation of these programs is strong evidence that the energy behind the reform efforts may

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[154] See Todd Harrison's "Evaluating Options for a Sustainable Defense" CSBA July 2010 and "The QDR in Perspective: Meeting America's National Security Needs in the 21st Century" published by the QDR Independent Panel. Both documents raise concerns that the proposed changes to the technological strategy do too little to align the agencies that set requirements with those that budget for programs. Specifics on line management and successes in the F-15A, B-1B and F-117 are on page 86-87 of the latter.

[155]*Weapon System Acquisition Reform Act of 2009*. Public Law 111-23. 111th Cong., May 22, 2009. There are two other important oversight positions created by the legislation, the Director of Developmental Test and Evaluation (DT&E) and the Director of Systems Engineering. The Secretary of Defense will appoint both individuals and they will report to the Under Secretary of Defense for Acquisition, Technology, and Logistics. Their mission is to improve the integration of testing and evaluation in the DoD's system engineering process, a critical gap that currently exists.

have reached a level that allows it to interact effectively with the social dimension of strategy to overcome interests that normally defend the status quo in the inefficient DoD acquisition process.

The sufficiency of DoD's technological strategy is thus in doubt, although recent events are encouraging. The strategy has historically demonstrated that it can deliver exceptional weapon system that generate and sustain a technological advantage for US forces. Unfortunately, the execution of the strategy struggles to deliver these technological advantages at affordable costs and along required timelines. The result of these weaknesses has been a system plagued with cost overruns which prevent the purchase of required quantities of weapons and which may preclude developing other advancements. The delays that the current system generates have resulted in service members fighting temporarily at a technological disadvantage, as seen in Iraq while waiting for the delivery of the MRAPs, or fighting without all of the advantages they should have, as caused by delays in the delivery of the F-22 Raptor. The current strategy in the QDR adjusts the execution of the strategy to overcome these problems. Although the future can never be known, initial indicators as evidenced by the historic cancellation of large programs, such as the second engine for the F-35 Lightning II, are positive and the new strategy is assessed as moving towards sufficiency.

National Military Social Strategy

The final section of this paper will expand upon concepts that are important to the definition of supportability as it applies to the social dimension of strategy. It will also develop the analysis needed to determine if the current military strategy is supportable in its social dimension. The interests defined in the section on operational strategy are important here, as the lack of an existential threat and the likelihood that US forces will remain involved in stability and foreign security assistance operations influence a society's perception of security and national strategy. Michael Howard noted that, "no successful strategy could be formulated that did not take into account all of [the dimensions of strategy] but under different circumstances one or

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another of these dimensions might dominate."[156] In the current environment of constrained budgets and continued involvement in small wars, there is a strong argument that the social dimension of strategy may be the dominant one needed to formulate an overall successful military strategy.

Two concepts not yet addressed affect the supportability of the military's social strategy. The first is how military casualties affect social support for the use of the military element of national power. Research in this area provides useful insight into how the public conducts its own cost-benefit analysis for strategic decisions. Eric Larson's 1996 RAND report *Casualties and Consensus* identified some of the major considerations the US public uses to make decisions about supporting military strategy. Specific considerations were consensus among the nation's elites, cost benefit analysis, and expectations of success. Studies that are more recent support these considerations, but identified a strong emphasis on the importance of "expectations of success." In general, the American public is far more likely to support a military strategy that is perceived to be successful, a conclusion that is important when the national military strategy competes for resources and considers risk.[157].

The second concept not yet addressed affecting the supportability of the social strategy is the concept of civil-military relations. As DoD approaches the issue of social support for its

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[156] Michael Howard. "The Forgotten Dimensions of Strategy," 978; see also Colin Grey's *Modern Strategy*, Oxford University Press 1999, 21-24; and T.E. Lawerence's *The Seven Pillars of Wisdom: A Triumph,* New York: BN Publishing, 2008, 191-2.

[157] Eric Larson. *Casualties and Consensus; The Historical Role of Casualties in Domestic Support for U.S. Military Operations*. Santa Monica, CA: RAND, 1996, 10-14. Separate research in the book *Paying the Human Costs of War* supports this emphasis on the importance of the likelihood of success to public support for military operations. (Christopher Gelphi, Peter D. Feaver, and Jason Reifler. Princeton, NJ: Princeton University Press. 2009. 18-22). This paper relies upon the cost benefit model that emphasizes likelihood of success in analyzing public support for the national military strategy due to the ongoing wars. Although there is extensive research done on the political economy of national and military budgeting, during a period of active conflict that has casualty reports in the news, this paper judged that the casualty cost benefit analysis model was more pertinent to the topic at hand.

military strategy, it is also important to understand the norms that control the manner in which

members of the military interact with their civilian leadership and the public as a whole. It would

be impossible to detail the theories of civil-military relations herein that play into the relationship

between the US public, the president, congress, and the US military/DoD. Thus, this paper will

only address aspects that are critical to understanding the options available to DoD as it acts in

the social dimension of strategy. One of the most important aspects of US civil-military relations

is the limits on the interaction with the public that rises from historical norms and current

directives. Admiral Mullen's statement following General McCrystal's removal from command

in 2010 was a great reminder that military professionals "are and must remain a neutral

instrument of the state, accountable to and respectful of those leaders no matter which party holds

sway or which person holds a given office."[158] This falls in line with theories of civil-military

relations espoused by numerous experts that recommend relationships in which the military is

professional and not involved in the politics behind decision-making, but rather provides the

political leadership its best expert advice and then executes aggressively the strategies that the

political leaders select.[159] In this environment, the actions of generals and admirals in the social

sphere is limited to external audiences such as the public, congress, and the president as they

struggle to provide professional advice that is politically neutral. The DoD is not without political

actors, however, as political appointees such as the Secretary of Defense and many of the

deputies can act within the political environment without violating any professional norms. For

DoD this bifurcation of professional expectations results in limiting the effectiveness of all but

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[158]Michael Mullen and Robert M. Gates. "JCS Speech As Delivered by Secretary of Defense Robert M. Gates and Adm. Mike Mullen, chairman of the Joint Chiefs of Staff." June 24, 2010. http://www.jcs.mil/speech.aspx?id=1412 (accessed Feb 19, 2011).

[159] See Samuel P. Huntington, *The Soldier and the State,* 73-74; Martin L. Cook, *The Moral Warrior Ethics and Service in the U.S. Military,* Albany: State University of New York, 2004, 62, 90-93.

the highest ranking military officers in exerting pressure on the social dimension of strategy, with the more important role played by political civilian appointees. Although it is possible for military officers to reject the norm and inject themselves into the political debate, they do so at great personal and organizational risk, placing not only their career in jeopardy but also the trust that the US public has for the military as an institution.[160] It is thus a careful balancing game where efforts to affect political decisions can generate the opposite effect in the social dimension of strategy if the public and governmental perceives the military as overstepping its bounds.

With these concepts in mind, DoD's social strategy must balance the need for security versus the desire for social support programs and low taxes and yet somehow motivate the US public to make the sacrifices necessary to support the current military strategy. Failing this, it must clearly lay out the increase in risk associated with cutting resources which are critical to the strategy. There are three main issues identified in other dimensions of strategy that the social strategy must address. The first is the fact that sustaining the current force structure requires sustained increases of between two and three percent growth above inflation in the DoD budget.[161] The second main issue requiring social support is sustaining reforms in the acquisition process. The final critical social issue concerns the strategies intended to deal with demographic and economic trends as they relate to the All Volunteer Force (AVF).

DoD's current strategy to ensure the social support needed to deliver the current force structure's required budget is truly a realized strategy. The QDR lays out the deliberate strategy

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[160] Gallup has found through polling that the US Military has retained the highest confidence in an institution since 1998, Jul 22, 2010. http://www.gallup.com/poll/141512/Congress-Ranks-Last-Confidence-Institutions.aspx (accessed Dec 4, 2010). Dale R. Herspring provides many examples of the professional consequences of "going public" for military officers in his book *The Pentagon and the Presidency.* One good example is his description of President Eisenhower's fight with the Joint Chiefs of Staff on pages 107-110 (Lawerence, KS: University Press of Kansas. 2005).

[161] Robert M. Gates. "Remarks as Delivered by Secretary of Defense Robert M. Gates, Abilene, KS, Saturday, May 08, 2010." http://www.defense.gov/speeches/speech.aspx?speechid=1467 (accessed Dec 4, 2010).

which emphasizes the need to be efficient, make good use of the funds provided, cut low priority programs to rebalance the strategy, and sustain the current budget levels of around four percent and the existing force structure. The DoD then injected into this strategy an emergent strategy which displayed a willingness to accept force structure cuts and to sacrifice desired programs to "keep any of the savings they generate to invest in higher priority warfighting needs."[162] The emergent strategy also asks for a growth in the DoD budget of only one percent a year after inflation, a strategy that requires DoD to finance the remaining 1-2 percent growth needed to sustain the force structure through internal cost savings measures. Thus, the realized strategy in this area becomes one that asks for a lot, settles for less, and demonstrates credibility through sacrifice and efficiency. The realized strategy also engages the public directly through the Secretary of Defense and other political appointees, attempting to motivate the public to choose this funding strategy for the DoD over social programs. It does this by explaining that the risk associated with further cuts would create excessive risk to troops deployed on combat missions and the strategic flexibility needed to respond to the unexpected, and by laying out the reality that further cuts to the defense budget will not fix the economic problem that is driven by increases in social spending and debt.[163]

The need to sustain social support for proposed reforms to DoD's acquisition process is critical to the realized strategy for budgetary support and on its own due to the problems of timeliness and cost identified in the technological dimension of strategy. The process of cutting

[162]DoD. "News Release 706-10, Secretary Gates Announces Efficiencies Initiatives." Aug 9, 2010. http://www.defense.gov/releases/release.aspx?releaseid=13782 (accessed Nov 24, 2010).

[163] The QDR addresses risk but numerous statements from Sec Gates and Dep Sec Lynn emphasize this risk, an assessment agreed with by defense experts such as Andrew F. Krepinevich, Barry Watts, Frederick W. Kagan and Thomas Donnelly. This paper has previously established the culpability of social spending and payments of interest on existing debt as the true cause of budgetary pressures in the US. Opposing views hold that the assessment of risk is overstated and that the gap between US capability and likely adversaries is so great it would be acceptable if it was allowed to shrink, see "Debts, deficits, and Defense, a Way Forward" for specifics on these arguments.

existing programs is incredibly complex and engages interests that involve the president, congress, and the public, as funds affect jobs, national security, and political priorities. Even recent success stories such as the cancellation of the second engine for the F-35 Lightning II fighter demonstrate how critical social support is for military acquisition reforms. Despite being three years behind in development from the existing engine, which is already flying, the second engine took over 15 years to cancel at a cost of $3 billion.[164] These additional expenditures occurred only because of the political and public pressure brought upon DoD to continue the program in the interest of sustaining local economies and jobs in the states where the manufacturing plants are located. [165] If Secretary Gates' multidimensional reforms are to succeed, the social support needed to overcome parochial local interests such as these is critical.

Preparing the social strategy needed to continue support for the military strategy in the face of economic and demographic trends is also critical to ensuring the success of the overall strategy. The economic realities outlined in the section on the logistical dimension of strategy clearly lay out a future in which the US government must either drastically cut social programs or raise taxation rates. At the same time, an aging population will decrease the number of military age workers in the overall population. As a result, a significant challenge to the All Volunteer Force will consist of increased competition for fewer high quality workers at a time when the government has fewer resources to compete for these workers. The increased competition will only exacerbate the manpower shortage the Neil Ferguson cites as a critical failure of US foreign

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[164] Figures are from the GE website at http://www.f136.com/about (accessed Mar 31, 2011).

[165] The F-136 alternate engine program for the F-35 fighter was programmed to receive more than 3 billion in funding over four years, this despite the fact that it was years behind the engine already in service, was projected to generate little if any savings, and was suffering from its own cost and technology problems. The effort to save the program and the jobs in Indiana and Ohio was energetic, including ads on the subways that defense officials ride in DC, TV ads, a dedicated web site, and a full court press by politicians in the house and senate to pressure DoD into accepting the unneeded expense. Only consistent effort from Secretary Gates and the large freshman class in the congress led to the cancellation. See http://www.f135engine.com/ (accessed Feb 19, 2011).

policy[166]. Secretary Gates has begun efforts to address this shortage by calling for increased

participation in defense by members from all segments of society and building the support needed

to begin reducing some of the rising personnel costs associated with the AVF, especially in the

area of medical costs.[167] Although it is too early to tell if these efforts will be successful, the

rapidity of the growth in personnel costs for the military makes it likely that additional measures

must decrease the costs associated with sustaining the AVF. In a future that predicts tighter

competition for qualified workers and an increase in the percentage of each dollar spent on retiree

services, DoD must act to ensure it remains competitive as an employer and can hire the

manpower it needs.[168]

In addition to these three challenges, there are numerous opposing views arguing that the

current military strategy is inherently unsupportable. In general, these opponents believe the only

viable strategy is one that significantly reduces capacity and capabilities and which would result

in a proportional reduction in the resources needed to sustain the strategy. [169] This school of

thought cites two main arguments in support of their opinion, the first being that it will be

impossible for a politician that agrees with the current strategy to be elected / reelected, the

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[166] Niall Ferguson. *Colossus.* 204.

[167] Secretary Gates issued an eloquent call to serve to those graduating from the most prestigious colleges and universities in the US in his speech "Remarks by Secretary Gates at Duke University, North Carolina." Sep 29, 2010. http://www.defense.gov/transcripts/transcript.aspx?transcriptid=4691 (accessed Dec 4, 2010). He also addressed health care costs stating, "health-care costs are eating the Defense Department alive, rising from $19 billion a decade ago to roughly $50 billion – roughly the entire foreign affairs and assistance budget of the State Department." ("Remarks as Delivered by Secretary of Defense Robert M. Gates, Abilene, KS, Saturday, May 08, 2010." Ibid., 1.)

[168] The QDR Independent Panel. "The QDR in Perspective." 67-75.

[169] The Sustainable Defense Task Force addresses the concept that the US overspends on security at length, "Debts, Deficits, and Defense. Alfred G. Cuzán and Richard J. Heggen's paper "Fiscal Policy, Economic Conditions, and Terms in Office: Simulating Presidential Election Outcomes" provides a view into their modeling process that predicts voter backlash against presidents that execute policies reliant upon increases in government spending. (http://uwf.edu/govt/facultyforums/fiscalpol2.pdf, accessed Feb 4, 2011).

second being that the current strategy is inefficient because it is possible to sustain the US influence in the world without the level of spending required by the current strategy.

Although this paper cannot address in detail the factors that affect political election in the US, an overview of how support for the military strategy may affect electability is required. Conventional arguments propose that domestic policy always trumps foreign policy when it comes to elections. Thus, a presidential candidate who outlines a need for higher taxes or decreased social spending to support the military strategy and foreign policy is one that will lose the election. However, recent research suggests that this conventional wisdom fails to consider the effects of globalization on presidential politics and how "the lines between domestic and foreign policy have eroded, if not completely disappeared."[170] Indeed, there are predictions that presidential candidates that can translate important international issues in a manner that allows them to resonate with domestic voters may have an advantage in developing a coherent and socially supportable foreign policy. Although the research on the increasing impact of foreign policy and foreign affairs on US domestic policy and elections is still being written, there is no consensus that a candidate pursuing the resources needed for a successful foreign policy must fail. Indeed, the logic presented in the research behind the public decision-making process for military conflict suggests that a candidate can generate the social support needed for the security strategy, but key to this is linking the fiscal policy to the concept of success in military actions and foreign policy will occur and will benefit the US public. Successfully creating this linkage

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[170] Linda B. Miller. "A Changing Universe, Foreign Policy and U.S. Presidential Elections." *The Brown Journal of World Affairs*. Summer / Fall 2004, Vol XI, Issue I. http://www.bjwa.org/article.php?id =uCgJ8O7a56FcC2TiWNj6jZmlF6tFj693UZ8J4GbR (accessed Dec 12, 2010), 2. During World War II, the US public with a population of only 138 million bought $185 billion of defense or war bonds in four years, in 2008 dollars that would exceed 2 trillion dollars. The program used political leaders, movie stars, public personalities, and posters to motivate bond sales. The historical record clearly shows that the US public can sacrifice when it is properly motivated and believes in the cause. (Beth Lieberman, "Any Bonds Today," *Smithsonian, Feb2002, Vol. 32 Issue 11*, 64).

could result in an advantage in an election.[171] This argument is especially pertinent in the near

future as ongoing military conflicts shape a portion of the debate on foreign versus domestic

policy in presidential elections.

There are also opponents to the current military strategy who feel that the price far

outweighs the benefits resultant from the strategy. "Debts, Deficits, and Defense, The Report of

the Sustainable Defense Task Force" summarizes these views and it proposes numerous cuts not

envisioned in the current military strategy. However, this report's recommendations for steep cuts

fail to put the reduction in capabilities and capacity in strategic perspective. One example is the

report's desire to reduce the Navy to 230 ships, a recommendation that comes at a time when the

Navy is experiencing increasing difficulty meeting the missions that DoD and the president

assign it with an even larger fleet.[172] Recommendations in other areas, such as reducing the size

of the air force's fighter component, and sharp reductions in the end strength of the Army and

USMC, follow a similar pattern of emphasizing cost savings with little analysis of how the loss of

capabilities and capacity impacts risk. Indeed, the "Logic of Restraint" that the report proposes

fails to address how any of the major security interests would be affected by its recommended

cuts and relies upon the reader's willingness to accept the report's view of threats in the future.[173]

Although the report does recommend some worthwhile measures, reducing health care costs and

continuing acquisition reform are examples; the recommended cuts are only possible because of a

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[171] Christopher Gelphi, Peter D. Feaver, and Jason Reifler. *Paying the Human Costs of War.* 21.

[172] Philip Ewing. "US Navy Readiness Flaws Exposed." DefenseNews. http://www.defensenews. com /story.php?i=4058309 (accessed Dec 9, 2010).

[173] The Sustainable Defense Task Force. "Debt, Deficits, and Defense, A Way Forward." http://www.comw.org/pda/fulltext/1006SDTFreport.pdf (accessed Dec 13, 2010). 34. It is worthwhile to note the report was commissioned by Representative Barney Frank, a noted proponent for cutting DoD's budget by 25 percent in favor of social spending, and developed in conjunction with Laicie Olson, a Senior Policy Analyst at the Center for Arms Control and Non-Proliferation, an organization with a mission to reduce nuclear weapons, increase non-proliferation efforts, optimize defense spending, and halt the spread of chemical, and biological weapons. (http://armscontrolcenter.org/policy/securityspending/articles/Debt_ Deficits _Defense/).

failure to consider what the true national security interests are and what is required to counter threats to those interests.

Thus, the current analysis of the supportability of the social dimension of the military strategy shows that it is not likely to succeed without further revisions. Secretary Gates' arguments that the military's share of discretionary spending is not the true problem and that the real problem is programmatic spending for social programs, does not appear to be winning. The shift from 2009 through 2011 demonstrates a decrease in support for military spending, a fact that is more troublesome when combined with a sharp decrease in support for spending on aid to impoverished people overseas.[174] A continued shift in public opinion of this nature could mark the beginning of a resurgence in isolationist thought in the US, and that trend could seriously undermine the national security strategy that correctly identifies the increased importance of international relationships and economics to US domestic prosperity. The president, congressional leaders, and DoD must address the social strategy for the nation's grand strategy and security strategy to overcome this trend. A failure to do so will likely result in a sharp reduction of resources for the DoD and the DoS, a reduction that will result in fewer capabilities and a reduced capacity to ensure the US's security in a dangerous world.

Conclusion

The goal of the military component of the US security strategy is to develop a flexible strategy that sets the conditions for security success for the next twenty years. Analysis of the current US strategy using the operational, logistical, technical, and social framework first laid out by Michael Howard provided a detailed analytical tool that this paper used to assess the likely

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[174] PEW Research Center. "Rethinking Budget Cutting, Fewer Want Spending to Grow, But Most Cuts Remain Unpopular." http://pewresearch.org/pubs/1889/poll-federal-spending-programs-budget-cuts-raise-taxes-state-budgets (accessed Mar 6, 2011).

effectiveness of the strategy. The analysis shows that despite strengths in the operational dimension, DoD must continue to adjust the logistical, technical, and social dimensions of the strategy to increase its overall effectiveness.

The strength of the current strategy is its operational dimension. Built upon a foundation of robust research into the national security interests and the current and likely future threats to those interests, the operational strategy clearly identifies required capabilities to counter those threats. The QDR accurately identifies gaps in the current force structure and directs the rebalancing needed to fill those gaps both in the short term and out into the near future of 2019. This paper provided evidence as to the operational success of the forces currently fielded by the US. The US clearly has the ability to create a force that is trained, manned, equipped, and positioned in a manner that will ensure its success against likely adversaries in a range of missions from peacekeeping operations through major combat operations against a state adversary. Overall, the operational dimension of the current strategy is as robust and flexible as one could expect and is likely to generate a successful operational force.

A successful operational strategy, however, does not necessarily mean that the US will be logistically able to sustain the creation and deployment of the size of the force needed to address all of the nation's global security concerns. The evidence presented in this paper shows that it is possible for the logistic strategy to achieve this capacity in a sustainable fashion, but not likely without adjustments. It is possible, as the strategy relies upon recent history to demonstrate its ability to create and sustain a force of over 400,000 deployed service members executing numerous simultaneous operational deployments. However, the strategy's projections for continued future success rely upon assumptions that may be invalid. Given the criticality of these assumptions to the overall success of the logistical dimension of strategy, DoD must make adjustments.

Assumptions about sustaining budget levels for DoD, reduced demand for deployed troops, and borrowing security capacity from partner nations are all in doubt due to recent events.

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Protecting the DoD budget from cuts will become increasingly difficult as congress cuts domestic services and programs to address the federal budget deficits. Assumptions that there will be a reduced demand for deployed troops are also questionable given recent developments in the international security arena. Riots and rebellion in the Middle East and North Africa, and a series of incredible natural disasters such as the Haitian earthquake in 2010 and the Japanese earthquake and tsunami of 2011, all point to the danger of assuming that a strategy can predict the challenges that the future will bring.

Predictions that the US will be able to rely upon partners to provide security capacity are also questionable, as the majority of US allies have cut their defense budgets and military capacity precipitously in the wake of the global financial crisis. The no-fly zone over Libya in 2011, most stridently called for by France, is an excellent example of a situation in which the nations from which the US would like assistance are instead looking to the US for capabilities and capacity that they no longer possess. Developing the force that the DoD envisions is possible and even sustainable for less than 4 per cent of the US GDP into the future. However, even four percent is unlikely as a base level for DoD budgeting given the increased competition for limited resources within the US budget. Unexpected events that demand a response that only the military can provide, and the decreasing capacity of partners and allies to assist with their own security capacity, will increase the risk that a crisis occurs for which the US has no capability or free capacity to respond with.

This paper evaluated the sufficiency of the technological dimension of the military strategy. It did this by testing the past technological strategy against three goals and then determining if corrective action dictated by the current QDR was likely to create sufficiency in this dimension. The history of the US technological strategy was assessed as a mixed result, as technological advantage had been delivered but often at a frightful cost and at a pace that left US forces vulnerable to technological disadvantages for unnecessarily long period of time. The good news for the current strategy is that it correctly identified the core weaknesses of past

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technological strategy and seeks to adjust to a 75 percent solution that fields capabilities more quickly and at a reduced cost. It also commits to limiting the search for technological solutions where the technology is insufficient to address the problem, eliminating costly and fruitless research, and refocusing efforts on the wars that the nation is in, rather than scenarios that are unlikely given decades of recent history. Providing a move towards sufficiency in the technological dimension are recent successes in areas in which DoD has traditionally struggled. Cancellation of existing projects, such as the second engine for the F-22 and the USMC's Expeditionary Fighting Vehicle are positive indicators that the reforms needed to make this strategy sufficient are likely and may be lasting.

In the current era, the social dimension of strategy is perhaps the most critical one, as ongoing wars and budgetary constraints align to emphasize the criticality of social support to enable the effectiveness of the current strategy. Motivating the population of the US to make the sacrifices needed to sustain other dimensions of the strategy occurs within the social dimension. Political decisions regarding taxation, social spending, and defense spending will take public opinion and the impact of political decisions on elections into account. Thoughts on how changes to defense acquisition programs, especially the cancellation of existing programs which affects jobs in congressional districts, will come into play. Leadership provides the inputs needed to shape social attitudes, and consensus among the leaders of the nation is an important concept in this area. Professional norms and public law limits the role that military officers may play in the social dimension, increasing the importance of the actions of political appointees such as the Secretary of Defense. Research shows that the US public is capable of making informed choices when it comes to decisions to commit military forces, but that they want to understand that the efforts will be successful and likewise prefer that consensus as to the conduct of the strategy exist among the nation's elites.

These factors challenge the supportability of the current social strategy, as politicians have demonstrated a willingness to challenge the security strategy for individual and regional

political gain, eroding national consensus. Without consensus and true political leadership, it is unlikely that the US society will choose to make the sacrifices necessary to resource the security strategy. A preference for social programs, unwillingness to pay additional taxes, and lack of understanding as to the true risk associated with surrendering a global role in an increasingly global world will limit social support for the budgets that DoD needs to successfully implement this strategy. Overcoming this shortfall is therefore the primary challenge for national leaders in the short term, and failing in this it is unlikely that DoD will be able to execute effectively the current strategy, despite its sound operational dimension.

The monograph thus establishes that the current deliberate military strategy of the US is likely to be ineffective. This occurs due to faulty assumptions in the logistical dimension, the need for extensive reforms within a historically unchanging procurement bureaucracy that affects the technological dimension, and indications that American society prefers social programs to defense spending in the social dimension. Emergent strategies are required immediately to address these issues and adjust the course of the current strategy in order to ensure DoD remains on track to reach an effective realized strategy. The solid operational core present within the current national military strategy cannot succeed in the long run if it does not have the solid social support needed to deliver the sustainable logistical and sufficient technological dimensions required to create an overall effective strategy.

Aircraft Systems.

APPENDIX A – 2010 QDR Force Structure

Main Elements of U.S. Force Structure

Taking into account the demands of a dynamic and complex security environment, the requirements of U.S. defense strategy, the need for enhancements to key capabilities across a wide range of missions, and the need for forces with sufficient aggregate capacity to meet the criteria laid out above, DoD has determined that U.S. forces, for the duration of the FY 2011–15 Future Years Defense Program (FYDP), will conform to the general parameters outlined below. Where ranges of force elements are provided, these reflect variations in force levels that are planned across the FYDP.

Department of the Army:

4 Corps headquarters
18 Division headquarters
       73 total brigade combat teams (BCTs) (45 Active Component [AC] and 28 Reserveve Component [RC]), consisting of:
              40 infantry brigade combat teams (IBCTs)
              8 Stryker brigade combat teams (SBCTs)
              25 heavy brigade combat teams (HBCTs)
21 combat aviation brigades (CABs) (13 AC and 8 RC)
15 Patriot battalions; 7 Terminal High Altitude Area Defense (THAAD) batteries

Department of the Navy:

10 – 11 aircraft carriers and 10 carrier air wings
84 – 88 large surface combatants, including 21 – 32 ballistic missile defense-capable combatants and Aegis Ashore
14 – 28 small surface combatants (+14 mine countermeasure ships)
29 – 31 amphibious warfare ships
53 – 55 attack submarines and 4 guided missile submarines
126 – 171 land-based intelligence, surveillance, reconnaissance (ISR) and electronic warfare (EW) aircraft (manned and unmanned)
3 maritime prepositioning squadrons
30 – 33 combat logistics force ships (+1 Mobile Landing Platform (MLP))
17 – 25 command and support vessels (including Joint High Speed Vessels, 3 T-AKE Class dry cargo/ammunition ships, 1 mobile landing platform)
51 roll-on/roll-off strategic sealift vessels
3 Marine expeditionary forces
       4 Marine divisions (3 AC and 1 RC)
              11 infantry regiments
              4 artillery regiments
       4 Marine aircraft wings (6 fixed-wing groups, 7 rotary-wing groups, 4 control groups, 4 support groups)
       4 Marine logistics groups (9 combat logistics regiments)
       7 Marine expeditionary unit command elements

Main Elements of U.S. Force Structure (continued)

Department of the Air Force:

8 ISR wing-equivalents (with up to 380 primary mission aircraft
30 – 32 airlift and aerial refueling wing-equivalents (with 33 primary mission aircraft per wing-equivalent)
10 – 11 theater strike wing-equivalents (with 72 primary mission aircraft per wingequivalent)
5 long-range strike (bomber) wings (with up to 96 primary mission aircraft)
6 air superiority wing-equivalents (with 72 primary mission aircraft per wing-equivalent)
3 command and control wings and 5 fully operational air and space operations centers (with a total of 27 primary mission aircraft)
10 space and cyberspace wings

Special Operations Forces:

Approximately 660 special operations teams (includes Army Special Forces Operational Detachment-Alpha[ODA] teams, Navy Sea, Air, and Land [SEAL] platoons, Marine special operations teams, Air Force special tactics teams, and operational aviation detachments [OADs])
3 Ranger battalions
165 tilt-rotor/fixed-wing mobility and fire support primary mission aircraft

The above parameters rightly reflect the heavy demands being placed on portions of the force by today's wars. As these demands evolve, so too may the appropriate size and mix of forces.

The formations and platform types shown here generally encompass only the major combat elements of each of the military departments. Nuclear forces, which will be detailed in the report of the Nuclear Posture Review, are not shown here.

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